Justus-Liebig-Universität Gießen
Zentrum für Internationale Entwicklungs- und Umweltforschung
Sektion 2: Ernährungssicherung

Social support networks of South African farm dwellers in the context of household food and livelihood security

A mixed methods approach from a gender perspective

Inaugural-Dissertation zur Erlangung des Doktorgrades (Dr. oec. troph.) des Fachbereiches Agrarwissenschaften, Ökotrophologie und Umweltmanagement der Justus-Liebig-Universität Gießen

eingereicht von:
Dipl. troph. Nicole Heumann aus Blankenburg (Harz)

Gießen, im Juni 2010

ACKNOWLEDGEMENTS

I would like to express my gratitude to all the people who supported and motivated me during the development of this dissertation in South Africa and Germany. Without their assistance this dissertation would not have been accomplished.

First, I would like to thank the participants in this study, for having the privilege to talk to them. Without their cooperation this research would not have been possible. Thank you for welcoming me and giving me the chance to be part of your lives. It definitely changed my life and the perspective on how I look at things. Further, thanks to the farm owners who gave us their permission to enter the farms and for always being cooperative and supportive.

To Prof. Dr. Ingrid-Ute Leonhäuser from the Institute of Nutrition Science at Justus-Liebig-University Giessen, I want to express my gratitude for her supervision as well as scientific and financial support. She warmly welcomed me into her team and assisted and motivated me throughout the process, providing technical knowledge and help in organisational procedures.

Prof. Dr. Michael Schmitz from the Institute of Agricultural Policy and Market Research at Justus-Liebig-University Giessen is acknowledged for his expert supervision and cooperation regarding the organisational matters.

Special thanks to the project leader Dr. Stefanie Lemke from the Centre for Gender and Nutrition at the University of Hohenheim for giving me the unique chance of being part of her research project. She always supported and motivated me in every possible way. She has not only been a mentor, giving me lots of scientific knowledge but also became a good friend, accompanying me in my personal ups and downs during this period. Thank you for all the thoughts and contributions which have framed this dissertation, and for your inspiration at a professional and private level.

Further, thanks to Dr. Fanie Jansen van Rensburg for his endless support and motivation during my stay in South Africa. He provided valuable knowledge regarding sociological and anthropological research as well as extensive background on South African history, cultures and traditions. Thank you for all the intensive talks we had and your humour that always filled me with pleasure.

My gratitude goes to Lemogang Sebeco for being my field assistant. She enormously helped to establish good relationships to the interviewees, and supported me in every imaginable way during and after field work. Our talks and discussions immensely broadened my understanding of the lives of farm dwellers. Thank you for all the support, enthusiasm and motivation. Without you it would not have been possible to gain the depth of information collected in this dissertation. It has been an absolute pleasure working with you.

I thank all members of the research team in South Africa: James Kekeletso Mothosola, Mantombi Mfumba, Ingrid Zali, Sophie Sithole, Sarah Matenge, Dikeledi Letsi, Lucert Nkuna, Godwin Moumakoe, Karin Schinagl, Christine Göbel, Christine Batel, Franziska Ollendorf, Anna Neff, Lineo Mathule, Lyna Mukoroverwa, Olivia Muza and Anna Tallant. It was a privilege for me being part of such a great team! Dear Anna Tallant, thank you very much for the final language check of this thesis.

I would also like to thank the Department of Nutrition at North-West University, Potchefstroom Campus, for the warm reception, for all the help during my stay, for providing me a study environment as well as providing financial support at the beginning of this study. My gratitude, especially to Prof. Dr. Este (HH) Vorster and Prof. Dr. Annamarie Kruger.

Further thanks to Prof. Dr. Michael Schnegg of the Institute of Social and Cultural Anthropology at the University of Hamburg, for providing extensive technical knowledge in the field of network analysis.

Dr. Johannes Herrmann, from the computer centre (Hochschulrechenzentrum) at the Justus-Liebig-University Giessen, is acknowledged for his consultation on statistical matters.

I also would like to thank the colleagues of the Professorship of Nutrition Education and Consumer Behaviour at Justus-Liebig-University Giessen, especially Carina Walter, Juliane Schmidt, Mareike Banka, Lisa Jansen and Jaqueline Köhler, for their assistance during my stay in Giessen and ongoing motivation to accomplish my goals.

Cordial thanks to the colleagues of the Centre for International Development and Environmental Research at Justus-Liebig-University Giessen, for always assisting with every arising need. Thanks to Dr. Matthias Höher, Sabine Viehmann, Petra Spamer-Trapp, Kerstin Kötschau, Martin Günther and Nino Chkoidze.

Furthermore, this study would not have been possible without the financial support from the Deutsche Forschungsgemeinschaft and the Post-Graduate Scholarschip of the Justus-Liebig-University Giessen. The financial support is greatly acknowledged.

Further thanks to Dr. Peter Glasauer from the Nutrition and Consumer Protection Division at the Food and Agriculture Organization. Thank you for all the interesting discussions and the technical knowledge I have gained during my stay in Rome, and for your ongoing motivational support.

During my stay in South Africa, I have made new friends who gave me a lot of emotional and motivational support, and who showed me the South African way of life. Thanks to Annabelle De Jager and Chris Boshoff, Inge Stegemann, Natalie Willemse, Peter Ongare Okeno, Mzamo Qoshekile, Trod Lehong, Leon Kohrs, Maria Castan and Deon Zulu. It was indeed wonderful to have this possibility of meeting all of you. Thanks, especially to Zandile Ntuli, Kgomotso Ikgpoleng and Lemogang Sebeco for becoming such dear friends, always being there for me and for sharing many joyful moments. Your friendship means so much to me, that it is not describable in words.

I warmly thank Sannie Claasen for welcoming me into her family and giving me so much emotional support. I appreciate every single moment we spent together. Your strength, faith, love and humour will always be an inspiration for me. Further thanks to Quinn Claasen, Tony and Daphne Sechel and their children for being my South African family. Thank you, Zainneth Claasen for all the valuable experiences and for your assistance with the proofreading.

Sincere thanks to my German friends for keeping up the friendship, supporting me and keeping me grounded all the time while I was away. Thank you, Franziska Balster, Anke and Norman Günther, Peggy Stier and Michaela Kauschka. Special thanks to Berit Wetzel for being a dear friend and assisting me with proofreading and formatting the dissertation.

At last, I would like to express very special thanks to my parents Martina and Klaus Heumann, my sister Nadine Heumann and my grandparents Helmuth and Helma Schmidt for their never ending support. Also, I would like to thank my late grandparents Franz and Hildegard Heumann. Even though being thousands of kilometres away, I always carried a piece of home with me knowing that you will always be there for me when I need you. I especially thank my parents for all their support and for continuously motivating me to reach my goals and to fulfil my dreams. Without you, this dissertation would not have been accomplished.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF BOXES

ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ANC	African National Congress
ARV treatment	Antiretroviral treatment
BMI	Body Mass Index
DFID	Department for International Development
FAO	Food and Agriculture Organization of the United Nations
FAS	Fetal alcohol syndrome
FLAGH	Farm labour and general heath programme. Situated at the Africa Unit for Transdisciplinary Health Research, North West University. Research and interventions carried out on farms and at farm schools in the North West Province.
GDI	Gender Development Index
GDP	Gross Domestic Product
GEM	Gender Empowerment Measure
GFI	Gross Farming income
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
MDS	Multi Dimensional Scaling
NFCS	National Food Consumption Survey (LABADARIOS 2000; LABADARIOS et al. 2008)
NGO	Non Governmental Organisation
NPO	Non Profit Organisation
PA	Percentage Agreement
SA DoA	South African Department of Agriculture
SA DoH	South African Department of Health
SA DoL	South African Department of Labour
SA DoSD	South African Department of Social Development
SA DTI	South African Department for Trade and Industry
SAHRC	South African Human Rights Commission
STATS SA	Statistics South Africa
STIs	Sexual Transmitted Infections
TB	Tuberculosis
THUSA	Transition and Health during Urbanisation in South Africa (VORSTER et al. 2000). 'Thusa' also means 'help' in the local language seTswana.
UNAIDS	The United Nations Joint Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNICEF	United Nations International Children's Emergency Fund
USD	Currency code for United States Dollar
ZAR	Currency code for South African Rand

GLOSSARY OF TERMS

(not in alphabetical order)
For the purpose of clarity, the following definitions have been used for this research. Some of them are existing definitions; others are introduced for this study and some are translations of common local African terms (*in italics*) used in everyday language on the farms.

Informal settlement:	The informal settlement in this study is located within the commercial farm area. It is a relatively densely settled area characterised by self-constructed shacks and with uncertain tenure rights. Inhabitants are unemployed people, pensioners as well as seasonally or permanently employed farm workers.
Farm:	The term 'farm' refers to a piece of land where crop and cattle farming is practised commercially.
Farm area:	The farm area in this study includes several farms and the informal settlement within a radius of 20 kilometres.
Farm worker:	A dependent wage labourer who works on a farm.
Farm dweller:	Any person who is living on a farm. In this research the notion 'farm dweller' also captures persons living in the informal settlement which is located within the farm area because many of them either work on neighbouring farms or have lived and worked on farms previously.
Farm household:	Farm dwellers who live in one house in the farm area.
Farm community:	All farm dwellers who reside on one farm or in the informal settlement. Although the term refers to a group of people who live in similar circumstances, it does not imply any degree of social cohesion or collective activities.
Support networks:	Support networks refer to the sum of actual and potential support relations between different network actors, encompassing interviewed farm dwellers and their associates.
Actual support relations:	In this study, actual support relations are relationships between ego and alter which are based on regular contact. They are considered as relationships which in fact exist and are incorporated in farm dwellers' everyday lives. Here, actual support relations focus on visits, exchange of food, small goods and money.
Potential support relations:	In this study, potential support relations are enumerated through hypothetical questions (e.g. "Suppose you need…") focussing on material, financial, assisting, emotional and lodging support.

Complete network:	"[A] specific set of linkages among a defined set of persons" (MITCHELL 1969: 2). In this study, the complete network refers to networks of interviewed farm dwellers within the spatial boundary of the farm premises.
Ego-centric network:	"[A] focal individual and the other persons (associates) linked directly to this individual by various kinds of social relationships" (KLOVDAHL 1994: 5555). In this study, the ego-centric network describes the relationships between the interviewed farm dwellers who are the focal individuals and their associates who can be living within or outside the farm area.
Ego:	A term applied in ego-centric network analysis which describes the focal individual. In this study, the term 'ego' refers to the interviewed farm dwellers.
Alter:	A term applied in ego-centric network analysis which describes the persons linked to the ego. In this study, the term 'alter' refers to all persons who provide actual or potential support to the interviewed farm dwellers.
Close kin/family:	Close kin or close family includes parents, children and siblings.
Extended kin/family:	Extended kin or extended family includes grandparents, grandchildren, aunt/uncle, cousins, niece/nephew.
Affinal kin/family:	Relatives related by marriage.
Bantustans:	Territories set aside for Africans during apartheid policies. Also referred to homelands. The term Bantustan was often used by those who were critical of the homeland-policy.
Stokvels:	Self-initiated savings associations. Its members deposit an agreed sum of money on a regular basis (e.g. monthly) which is directly disbursed to one member of the group in a rotating manner.
Burial society:	A form of private insurance company, working on provincial and national level. Members pay a monthly fee to receive financial support in case of death of the insurant or an insured household member. Some *stokvels* also operate as informal burial societies.
Tuck shop:	Small informal retailer operated from the house of the owner. The size of the shop and its assortments can vary immensely.
Mealie meal:	Fine maize meal.
Pap:	Porridge made from maize meal.
Morogo:	All types of green leafy vegetables.
Seshebo:	Side dish like meat or vegetables.
Vetkoek:	Deep-fried dumpling made of wheat flour.
Lobola:	Dowry paid by the groom to the parents or family of the bride.

1 INTRODUCTION AND OVERVIEW OF THE STUDY

1.1 Motivation for this research

Social relationships, social networks but also collective activities and civic engagements are all forms of social capital. In recent years, social capital has become an important concept in the field of poverty reduction and sustainable development (DFID 1999, WOOLCOCK 2001, HALPERN 2005). According to DFID (1999) social capital has a direct impact on efficiency of economic relations, management of common resources and maintenance of shared infrastructure. Social capital further facilitates innovation, including the development and sharing of knowledge (DFID 1999). NARAYAN (1997) argues that communities with rich social capital will be in a stronger position to confront poverty and vulnerability. Studies among South African households show that social capital plays a particularly important role for income generation and for coping with economic shocks (MALLUCCIO / HADDAD / MAY 1999, HADDAD / MALUCCIO 2002, CARTER / MALUCCIO 2003).

While there are studies from several countries exploring characteristics of social support networks (e.g. SCHWEIZER / SCHNEGG / BERZBORN 1998, LEE / RUAN / LAI 2005, BASTANI 2007), they do not provide detailed data on their impact on food and livelihood security in poor communities. Nonetheless, there are a few studies which address the link between social support and livelihoods and food security. These studies, however, focus either solely on instrumental and economic exchange (CASHDAN 1985, HADLEY / MULDER / FITZHERBERT 2007) or on community trust and organisation, and civic engagement (DIAZ et al. 2002, MARTIN et al. 2004, ADATO / CARTER / MAY 2006, TORKELSSON 2007). The study presented here will be the first using an in-depth network analytical approach to investigate the role of social support networks in the context of food and livelihood security in poor and marginalised farm worker communities in the North West Province of South Africa.

In many respects, South Africa can be regarded as a developed country, representing the largest economy in Africa with a modern infrastructure and well-developed financial, legal, welfare, communication, energy and transport systems (BURGER 2009). However, past policies of segregation and discrimination have left a legacy of inequality and poverty which is concentrated among 'black'[1] South Africans (WOOLARD 2002). Numerous studies in post-apartheid South Africa have shown that the country has one of the most skewed distributions of wealth, weak access to basic services by the poor,

[1] The term 'black' does in no way indicate any form of racism, but is used in post-apartheid South Africa to describe all of those previously excluded and categorically disadvantaged (Spiegel 2005). There is no classification, but the state still expects institutions (e.g. enterprises or universities) to report on the four categories whites, blacks, coloureds, and Asians/Indians.

high rates of unemployment and underemployment, and inadequate social security systems (MAY 2000, WOOLARD 2002, UNDP 2003, FRYE 2008). In fact, the country has one of the highest Gini-coefficients in the world, reflecting the coexistence of affluence and extreme poverty (THE PRESIDENCY 2009). Almost half of South Africa's population (49%) live under the poverty line of ZAR 524[2] per month. Moreover, the impact of the HIV/AIDS epidemic, with an estimated 11.7 percent of the population being infected (UNAIDS / WHO 2009), further threatens poverty-stricken households.

While South Africa has a strong agricultural sector and is self-sufficient regarding most primary foods (BURGER 2009), about half of the population is food insecure (PARIKH 2000), indicating that the national food supply does not reach all households equally. As national and local surveys in South Africa show (CHOPRA 2003, LABADARIOS et al. 2008), there are low levels of acute undernutrition (e.g. wasting) but high levels of chronic undernutrition manifested as stunting, reflecting chronic exposure to adverse conditions.

Farm dwellers belong to the most vulnerable population group in South Africa, experiencing poverty, low education levels, inadequate health status, and social discrimination (SCHENKER 1998, LONDON 1998, LONDON / SANDERS / NAUDE 2003, KRUGER et al. 2006, LEMKE / BELLOWS / HEUMANN 2009). These studies also point out high levels of alcohol abuse, domestic violence and chronic malnutrition. Recent studies undertaken in the North West Province reveal that farm workers have the worst nutritional status and the most inadequate diet of all population groups (VORSTER et al. 2000), with more than half of farm worker households being food insecure (LEMKE 2001, SITHOLE 2005, HEUMANN 2006) and 43.6 percent of children being underweight or stunted (KRUGER et al. 2006). While farm dwellers belong to one of the official target groups of South Africa's land reform, few specific policy initiatives exist to address the needs of farm dwellers (LAHIFF 2008), leaving them trapped in poverty and marginalisation.

While research on nutritional status and on food and nutrition security in South Africa has received increasing attention in recent years (LABADARIOS 2000, VORSTER et al. 2000, LEMKE 2001, CHOPRA 2003, LABADARIOS et al. 2008, CHOPRA / WHITTEN / DRIMMIE 2009), comprehensive information on household food and livelihood security of people living on commercial farms so far is limited (LEMKE 2005, KRUGER et al. 2006). Especially in-depth insights into the existence and nature of social networks and social capital within this deprived population group are largely absent. Using a mixed methods approach, this study builds on previous research and focuses on the underlying causes of food and livelihood insecurity and specifically on the role of support networks within this context. The research will describe ways in which individual social networks enhance, maintain or limit household food and livelihood security, with emphasis on

[2] Average exchange rate (Nov 2009) €: ZAR = 1: 11.2 (http://www.x-rates.com)

gender relations and intra-household dynamics. Moreover, this study will highlight farm dwellers' own perceptions regarding their lives and will reveal their position more than a decade after the political transition in post-apartheid South Africa.

Being part of a larger research project which investigated the link between nutrition security, livelihoods and HIV/AIDS of South African farm worker households (LEMKE 2005), this research builds on extensive field work, from 2004 to 2008, among three farm communities and one informal settlement in the North West Province of South Africa. Employing a variety of data collection methods, such as structured open-ended interviews, in-depth interviews, focus group discussions and observations, living conditions and daily life experiences with regard to the above highlighted key areas were explored among 37 male and 32 female farm dwellers in 49 households.

1.2 Contents of the dissertation

This dissertation consists of eleven chapters. Following the introduction, chapter two provides the conceptual background of this research. The chapter will clarify essential concepts applied in this study and elaborate on the most recent definitions and theories of food and nutrition security, livelihood security, social capital and social networks.

Chapter three presents a comprehensive overview of the general South African context and specific selected characteristics, its agricultural sector and the situation of farm dwellers, focusing on current economic, political, social and health aspects.

Chapter four explains the conceptual framework of this study and the overall research objective as well as the specific research questions.

A detailed description of the methodology applied within this study follows in chapter five, encompassing information of the larger research project, the research design, a description of gaining access to the farm communities, and methods of data collection and analysis. Moreover, the chapter describes the role of the researcher, ethical considerations, trustworthiness and limitations of this study.

Chapter six provides insights into the research setting, depicting structural changes caused by land reform and infrastructural characteristics of the study area. Additionally, photo documentation offers some visual impressions of farm dwellers' living conditions.

Results of this study will be reported in chapter seven. Socio-demographic and household characteristics of interviewed farm dwellers will be portrayed, providing important background information. This is followed by an extensive illustration of farm dwellers' livelihood security, livelihood constraints and threats, and the state of household food security. Further, intra-household dynamics and gender relations will be explored. Together, these aspects critically impact upon the characteristics and formation of social networks and thus allow this paper to provide in-depth insights into farm dwellers' social networks. The chapter closes with a description of other social capital resources common within the farm area.

In chapter eight, the results of this study will be discussed within the broader context of South Africa and the current situation in the agricultural sector. The chapter includes a detailed discussion of farm dwellers' livelihoods, followed by a discussion of farm dwellers' food and nutrition security. Thereafter, women's position on farms and within households will be highlighted. The last two sections of this chapter will discuss farm dwellers' networks and different gender roles within these networks, highlighting their two-pronged role as response strategy to constrained conditions on the one hand, and their impact on long-term livelihood outcomes on the other.

The conclusion of this research as well as recommendations will be provided in chapter nine. The dissertation closes with a summary and German summary (Zusammen-fassung) in chapters ten and eleven, respectively.

2 CONCEPTUAL BACKGROUND

Understanding the complex situation of South African farm dwellers and their activities relating to food and livelihood security at household level requires the clarification of some theoretical concepts. The following chapters provide an overview over the most recent definitions and theories of food and nutrition security, livelihood security, social capital and social networks.

2.1 Concepts of food and nutrition security

Food and nutrition security are concepts that have evolved considerably during the last decades in theory and in practice (GROSS et al. 2000: 2). They have been developed to assess and respond to global, national, regional as well as household food problems and have become important elements of poverty alleviation. This chapter will provide the definitions of food and nutrition security and will describe the four main dimensions derived from these concepts. And lastly, the causes of under- and malnutrition will be clarified using the UNICEF (1990) framework.

2.1.1 Defining food and nutrition security

'**Food security**' is a complex concept that has evolved over time. In 1992, SMITH, POINTING AND MAXWELL listed in their exhaustive review of literature on household food security 194 different studies on the concept and definition of food security. The origin of the concept of food security can be found in the mid-1970s, during discussions of international food problems at a time of global food crisis. The initial concept presented at the World Food Summit in 1974 focused primarily on food supply problems – of assuring the availability of basic foods at the international and national level (UNITED NATIONS 1975). During the next 27 years, the concept of food security was redefined several times by the FAO and World Bank, focusing not only at the national and international level but also including the household and individual level (CLAY 2003: 26-28).

The most internationally accepted definition of food security was established by the FAO for the World Food Summit in 1996, including access to sufficient food and incorporating food safety and nutritional balance:

> "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life." (FAO 1996)

The most recent redefinition can be found in The State of Food Insecurity in the World 2001 (FAO 2001) which is based on the definition established for the World Food Summit 1996 and further includes social aspects of access to food:

> "Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". (FAO 2001: 49)

The concept of food security can be applied to a global, national, regional, household and individual level. Yet, *household food security* is the application of the concept to the household level.

Based on the definitions above, *food insecurity* exists when people lack adequate physical, social and economic access to food (CLAY 2003:29). KRACHT (1999: 56) further argues that food security is not just the absence of hunger but also the absence of the risk relating to hunger.

Along with the notion of 'food security', the concept of '**nutrition security**' has evolved over time, too. According to QUISUMBING et al. (1995: 12):

> "Nutrition security [is the] adequate nutritional status in terms of protein, energy, micronutrients, and minerals for all household members." (QUISUMBING et al. 1995: 12)

Emphasising on the nutritional well-being, the concept of nutrition security covers all components of food security but moreover highlights important linkages to non-food and social components, such as access to health services, adequate supplies of safe water, adequate methods of food preparation and allocation, care for vulnerable groups with regard to age, gender and health status, as well as education (KRACHT 1999: 56-57, KUZWAYO 2008: 165-166).

2.1.2 The four dimensions of food and nutrition security

According to GROSS et al. (2000: 5), the definition of food security (see chapter 2.1.1) introduces four main dimensions: 1) Physical *availability* of food; 2) Economic, social and physical *access* to food; 3) Food *utilisation*; and 4) *Stability* of the other three dimensions over time. The relationships between these categorical elements within the framework of food and nutrition security are illustrated in figure 2.1.1. The concept of 'food and nutrition security' is expressed by the notion of 'nutritional status', since food and nutrition security is characterised by adequate nutritional status of all individuals within a household.

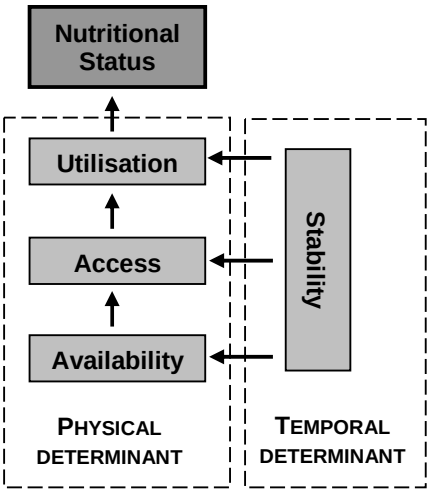


Figure 2.1.1: Categorical aspects of food and nutrition security (adapted GROSS et al. 2000:5)

GROSS et al. (2000: 5) state that food and nutrition security is influenced by two determinants: a physical and a temporal determinant (see figure 2.1.1). The physical determinant is described by the food flow: Availability → Accessibility → Use and utilisation. The temporal factor of food and nutrition security refers to stability which affects all three physical elements (GROSS 2000: 5).

The four main dimensions of food and nutrition security are defined as follows (GROSS et al. 2000: 5, FAO / EU 2008: 4-7):

Food availability addresses the supply of food and is determined by the level of food production, stock levels and net change. *Access* to food is ensured when all individuals within a household have sufficient resources to obtain appropriate food for a nutritious diet. Access to food is determined by market factors, food prices as well as the individual's purchasing power which is related to livelihood opportunities. Moreover, food can be accessed through trade, barter, collection of wild foods and community support networks. Food *utilisation* is the ability of the human body to ingest food and metabolise it. It refers to the biological and environmental aspects of food and nutrition security. Adequate utilisation requires not only a nutritious diet but also a healthy physical and social environment as well as adequate health care. The last aspect is *stability* (or sustainability) which refers to the temporal dimension of food and nutrition security. It points out the importance of having to reduce the risk of adverse effects on the other three dimensions food availability, access to food and food utilisation (GROSS et al. 2000: 5, FAO / EU 2008: 4-7).

When looking at temporal aspects, a clear distinction needs to be made between chronic and transitory food insecurity. Chronic food insecurity is the inability to meet food needs on an ongoing basis (e.g. due to poverty, lack of assets or inadequate access), whereas transitory food insecurity is the inability to meet food needs of a temporary nature (seasonal or unpredictable short-term conditions) (MAXWELL / SMITH 1992: 15). To achieve food and nutrition security, all four dimensions must be fulfilled simultaneously (GROSS et al. 2000: 5).

2.1.3 Causes of hunger and malnutrition

Food and nutrition security are prime determinants to achieve an adequate nutritional status. Consequently, food and nutrition insecurity might cause hunger or malnutrition. *Hunger,* also referred to as undernourishment, is the result of a continuously insufficient food intake that does not meet the necessary dietary energy requirements (FAO 2001: 50). *Malnutrition* is defined as an abnormal physiological condition caused by deficiencies, excesses or imbalances in energy, protein and/or other nutrients (FAO 2001: 49). Hence, malnutrition can be manifested in undernutrition but also in overnutrition.

According to the FAO (2007a), health consequences of hunger and malnutrition entail high levels of sickness and disability, shortened life spans and diminished productivity. While hunger results directly in diseases or death, undernutrition, mostly determined by vitamin and mineral deficiencies, can lead to stunted growth, blindness and compromised mental development of children. Conversely, overnutrition combined with poor physical activities and an unhealthy life style, leads to several chronic diseases like heart disease, hypertension and diabetes. In recent years, an increasing number of developing and transition countries carry the double burden of malnutrition, implying that their already limited resources must further cope with serious health consequences related to under- *and* overnutrition (FAO 2007a).

Widely accepted internationally is the **conceptual framework of causes of malnutrition** developed by the United Nations Children's Fund (UNICEF 1990). As figure 2.1.2 illustrates, the framework entails three levels of causality corresponding to immediate, underlying and basic causes of malnutrition, referring to both under- and overnutrition.

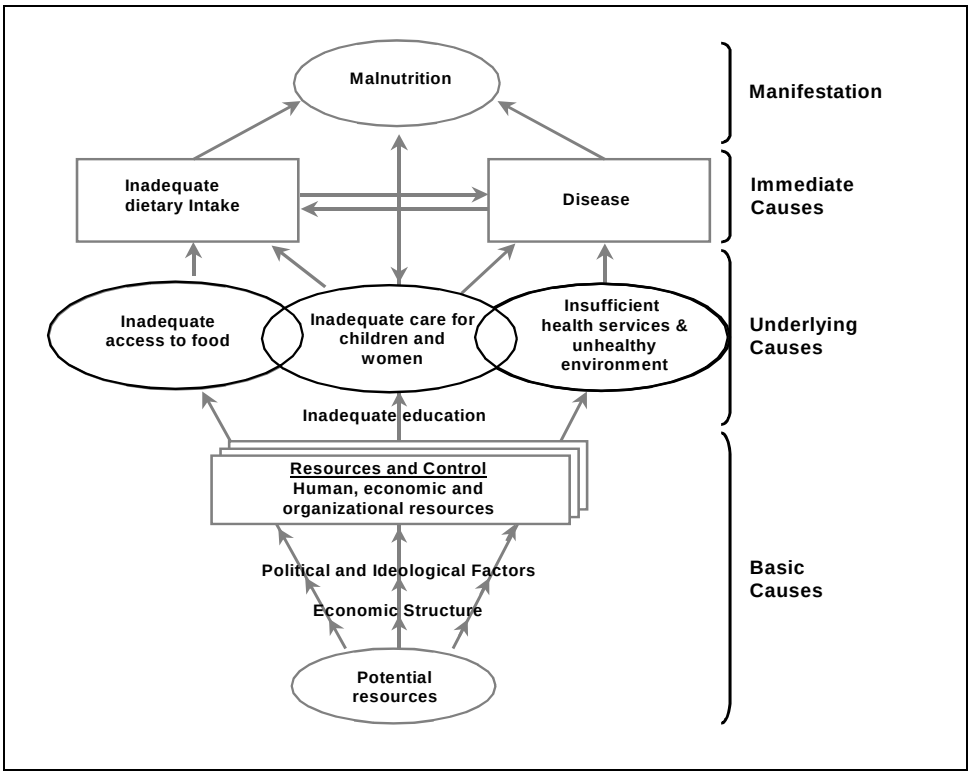


Figure 2.1.2: Conceptual framework of malnutrition (Source: UNICEF 1990: 22)

Initially drawn to improve the nutrition of children, this conceptual framework is widely used to identify causes of malnutrition not only among children but also among adults. According to UNICEF (1990: 18), malnutrition is the result of a long sequence of interlinked events.

Inadequate dietary intake and diseases are the *immediate causes* of malnutrition, manifesting themselves at the level of the individual human being. SMITH and HADDAD (2000: 5) state that these factors are interdependent to each other. Inadequate diet increases the susceptibility to disease. In turn, disease decreases appetite, inhibits the absorption of nutrients and competes for the body's energy. Dietary intake must be adequate in quantity and in quality for the human body to be able to digest and metabolise the food and its nutrients (SMITH / HADDAD 2000: 5).

The three *underlying causes* of malnutrition manifest themselves at the household level. These are inadequate access to food, inadequate care for mothers and children as well as insufficient health care and a healthy environment, including access to health services. UNICEF (1999: 18-20) points out that all three factors are interrelated and that they can be regarded as the insufficient fulfilment of specific basic needs. Food security and a healthy environment are fundamental for an adequate dietary intake and the control of common diseases. However, an adequate amount of good quality food, access to health services and a healthy environment are not sufficient to

ensure adequate nutrition or proper health care. Therefore, the additional determinant of maternal and child care is linked to the two other factors to ensure that food and health services are properly used for the benefit of children and women, often the most vulnerable members in the household. Additionally, inadequate or improper education, particularly of women, is often an underlying cause of malnutrition (UNICEF 1990: 18-20).

Basic causes of malnutrition relate to the national and community level and are determined by the historical background of the society and factors external to the society (UNICEF 1990: 20-21). Potential resources of a country or community can be limited by the natural environment, the access to technology and the quality of human resources. Furthermore, political, economic, cultural and social determinants affect the utilisation of these potential resources for food security, care as well as healthy environments and services (SMITH / HADDAD 2000: 7). Moreover, formal (government) and informal institutions, for example households, extended family and organised religious groups, build the interface between underlying and basic causes as they provide basic services or promote improved practices regarding hygiene, child and health care as well as food production and nutrition education (UNICEF 1990: 21).

2.2 Household livelihood security

Along with the conceptualisation of poverty and food and nutrition security from the national to the household level, the notion of livelihood security has increasingly emerged during the last three decades. This chapter provides the basic definitions of sustainable livelihoods and household livelihood security. Then, the conceptual framework of sustainable livelihoods will be presented.

2.2.1 Defining sustainable livelihoods and household livelihood security

The development of the livelihood concept dates back to the mid 1980s, initiated by the work of CHAMBERS (1988) and further developed by CHAMBERS and CONWAY (1992). The most commonly known and accepted definition of **sustainable livelihoods** is provided by the UK's Department for International Development (DFID) (1999: 1.1) adapted from CHAMBERS and CONWAY (1992):

> "A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base". (DFID 1999: 1.1)

With its holistic and people-centred approach, the concept of sustainable livelihoods aims at understanding poverty and thus became increasingly important in debates of policy making and poverty reduction (DFID 1999: 1.2).

The notion of **household livelihood security** has evolved along with the discussions and development of household food and nutrition security concepts in the late 1980s and early 1990s (FRANKENBERGER / MCCASTON 1998, FRANKENBERGER / DINKWATER / MAXWELL 2000). During that period, food and nutrition insecurity were regarded as only one subset of determinants affecting poor households, realising that wider livelihood considerations need to be taken into account in understanding poverty and vulnerability. According to FRANKENBERGER (1996, as cited by FRANKENBERGER / DINKWATER / MAXWELL (2000: 3), household livelihood security is defined as:

> "[...] the adequate and sustainable access to income and other resources to enable households to meet basic needs (including adequate access to food, potable water, health facilities, educational opportunities, housing, and time for community participation and social integration)".

Thus, livelihood failure is determined by a household's vulnerability to income, food, health and nutritional insecurities. A household's livelihood can be regarded as secure

when it has secure ownership of, or access to resources and generating activities, including reserves and assets to offset risks, ease shocks and meet contingencies (CHAMBERS 1988, as cited by FRANKENBERGER / DINKWATER / MAXWELL 2000: 3).

2.2.2 Conceptual framework of sustainable livelihoods

Widely internationally accepted is the sustainable livelihoods framework developed by DFID (1999: 2.1) as shown in figure 2.2.1. It presents the main factors that affect people's livelihoods as well as links and interactions between these factors.

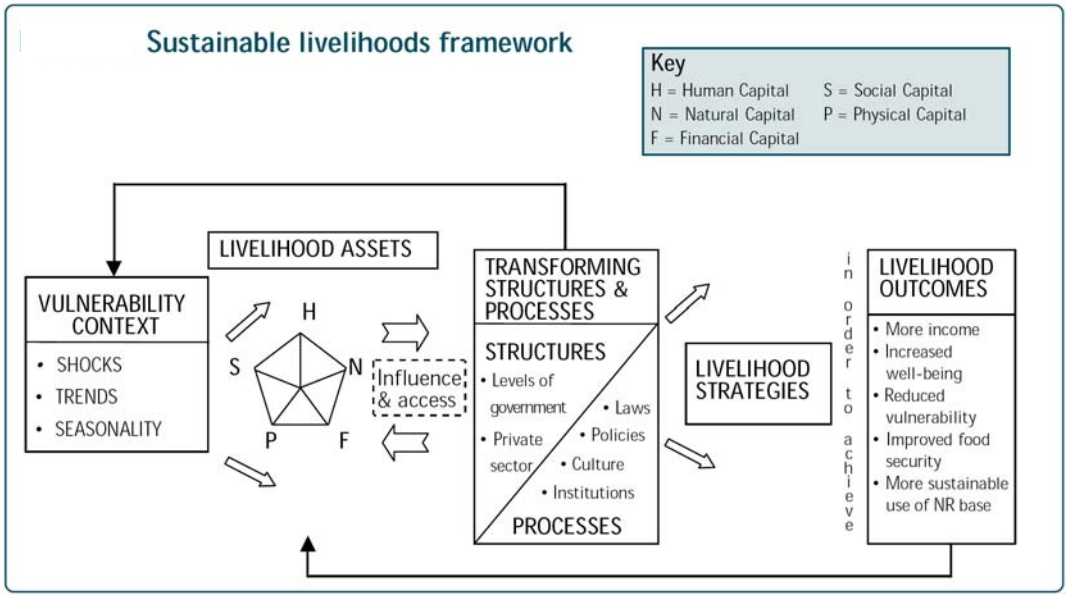


Figure 2.2.1: Sustainable livelihoods framework (Source: DFID 1999: 2.1)

As can be seen in figure 2.2.1, DFID (1999: 2.1-2.6) depicts different components influencing livelihoods. There is the **vulnerability context** which represents the external environment in which people exist. Moreover, there is the **asset pentagon** which identifies five core types of capital upon which livelihoods are built, namely human, social, natural, physical and financial capital. Social capital and social networks are of particular importance for the study presented here and will be further discussed in chapter 2.3. Another very important component of the livelihood framework refers to **transforming structures and processes**, including institutions, organisations, policies and legislation that shape livelihoods. **Livelihood strategies** comprise activities and choices that people make and undertake, respectively, to achieve their livelihood goals. The achievements of livelihood strategies are presented as **livelihood outcomes.** These may be more income, increased well-being, reduced vulnerability, food security and environmental sustainability (DFID 1999: 2.1-2.6).

2.3 Social capital and social network theory

Social capital is one of the five core livelihood assets upon which livelihoods are built (see previous section), thus playing an important role in achieving food and livelihood security at the household level. Nevertheless, the concept of social capital is multi-dimensional and is not only applied to the individual or household level but also to groups, communities, regional and even national levels. In this chapter, the concept of social capital and social networks will be clarified and defined, followed by an illustration of the two different network approaches, namely complete and ego-centric networks. Thereafter, a detailed description of the intertwined linkages between social networks, social support and social relationships will be given. Subsequently, GRANOVETTER's theory of 'The strength of weak ties' (1973) and NARAYAN's work entitled 'Bonds and bridges' (1999) are discussed as they present the most important theories within social capital and social network research.

2.3.1 Conceptualising social capital and social networks

In recent years, social capital has become a keyword for politicians and academics in the field of poverty reduction and sustainable development. Several authors from different fields have developed a number of concepts on social capital, however, until today a generally agreed upon definition or conceptualisation is still missing. One of the earliest and most popular definitions was established by the American sociologist James Coleman:

> "Social capital is defined by its function. It is not a single entity but a variety of different entities, with two elements in common: they all consist of some aspect of social structures, and they facilitate certain actions of actors - whether persons or corporate actors - within the structure". (Coleman 1988: 98)

A more recent definition is provided by the WORLD BANK (2010):

> "Social capital refers to norms and networks that enable collective action. It encompasses institutions, relationships, and customs that shape the quality and quantity of a society's social interactions".

Other well-known definitions were developed by BOURDIEU and WACQUANT (1992) and PUTNAM (1993). When considering the most common definitions and concepts in recent literature, six main dimensions of social capital come to the fore (COLEMAN 1988, PUTNAM 1993, HALPERN 2005, WORLD BANK 2010), namely:

Groups and networks

Trust and solidarity

Collective action and cooperation

Social cohesion and inclusion

Information and communication

Norms and sanctions

Further, it needs to be noticed that the concept of social capital is not only multi-dimensional but also multi-levelled. HALPERN (2005: 18-19) indicates that the concept has been applied to the individual, group and community as well as to the regional and even national level, ranging from very loose relationships between strangers to very dense relationships between relatives and friends.

These multi-dimensional and multi-levelled aspects of social capital make it hard to build a uniform concept.

Social networks, whether they are formal or informal, are one of the main dimensions of social capital. According to UPHOFF (1999: 219), they belong to the structural social capital as they are a form of social organisation. Social networks are held together by mutual expectations of benefits and reciprocity which derives from essential cognitive processes (UPHOFF 1999: 219). However, not all relations within a network need to be egalitarian or reciprocal (WELLMAN 1981: 181).

WASSERMAN and FAUST (1994: 9) define social networks as follows:

> "The concept of a network emphasizes the fact that each individual has ties to other individuals, each of whom in turn is tied to a few, some, or many others, and so on. The phrase 'social network' refers to the set of actors and the ties among them." (WASSERMAN / FAUST 1994: 9)

Actors and relations are the two main components appearing in social network research. *Actors* can be discrete individuals, corporate or collective social units. *Relations* are linkages between actors, for example kin relationship, friendship or business relationship (SCHNEGG / LANG 2002: 7). The content of a relation can be of various natures, including among others, transfers of material resources (e.g. borrowing things), association or affiliation (e.g. belonging to the same social club), behavioural interaction (e.g. talking to each other), formal relations (e.g. authority) or physical relations (e.g. a road connecting two points) (WASSERMAN / FAUST 1994: 17-20).

The focal point of network research, as stated by WASSERMAN and FAUST (1994:4), is the conceptualisation of relationships among social entities as well as on their structures and implications. From a network perspective, actors and their actions are viewed as interdependent and relational ties between actors are channels for transfering resources (material or non-material). Moreover, the structural network

environment is regarded as providing opportunities for, or constraints on, individual action (WASSERMAN / FAUST 1994: 4).

2.3.2 The two network approaches: Complete and ego-centric networks

Within social network theory, two different network approaches are consistent: Complete (full) networks and ego-centric (personal) networks as illustrated in figure 2.3.1. Both graphs show nodes (actors of the network) and ties between the nodes (relations between the actors). The difference of both graphs lies in the boundary in which actors are situated and whether the focus is on the structural patterns (complete network) or a focal individual node (ego-centric network).

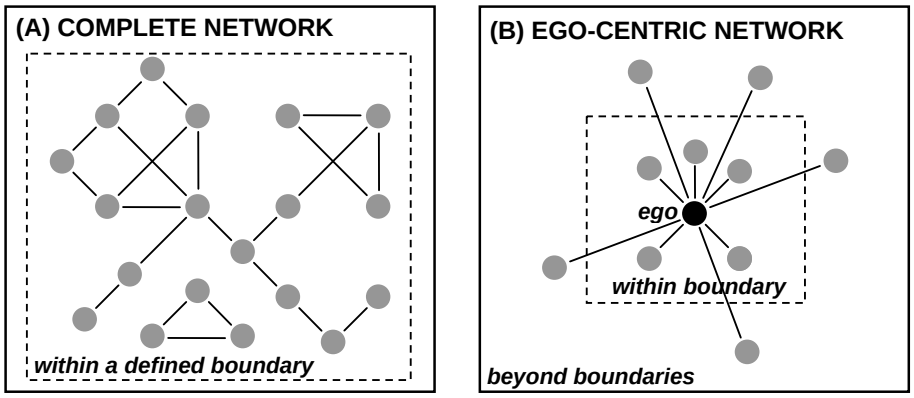


Figure 2.3.1: Illustration of a complete network (A) and an ego-centric network (B)

A **complete social network** is defined as "a specific set of linkages among a defined set of persons" (MITCHELL 1969: 2). It focuses on actors and their relations to all other actors within a specific boundary, revealing relational and structural characteristics of the whole network (WASSERMAN / FAUST 1994, SCHWEIZER 1996, SCOTT 2000, JANSEN 2006).

In the context of the present study, the complete network approach is used to focus on the network structure among farm residents living on the same farm.

Ego-centric networks are defined as "a focal individual and the other persons (associates) linked directly to this individual by various kinds of social relationships" (KLOVDAHL 1994: 5555). Most commonly, the studies on ego-centric networks address not only one focal individual but a sample of focal individuals.

Within this approach, two specific terms are used (see for example WASSERMAN / FAUST 1994: 42, SCHNEGG / LANG 2002: 12, JANSEN 2006: 65):

Ego: The focal individual.

Alters: Persons linked to the ego (also called associates).

In figure 2.3.1, the ego (illustrated by a black node) is surrounded by ties to his/her alters (illustrated by grey nodes). The ego is the centre of his/her network and the relationships to alters can lie within a specific boundary but also beyond this boundary.

Applying the ego-centric network approach in the context of this study on farms, focal individuals are farm dwellers and their relationships to alters will be investigated. Alters can be either farm dwellers residing on the same farm or persons who live outside the farm area, for instance on neighbouring farms or in urban areas.

Some network analysts argue that ego-centric networks are not 'real network data' because they only display a part of the whole network, neglecting structural and relational elements (HANNEMAN / RIDDLE 2005: 9). However, ego-centric networks have a number of advantages and potentials. In contrast to complete networks, they focus on the individual and its social environment rather than on the network as a whole. The emphasis is laid on gaining a general picture of network patterns and local social structures in which the ego is embedded (SCHWEIZER 1996: 241-242, HANNEMAN / RIDDLE 2005: 9, SCHNEGG / LANG 2002: 12). Further, the ego-centric network approach aims to understand how networks affect individuals. Everyday life experiences of individuals and their social support systems are often related to ego-centric network research (WELLMAN / WORTLEY 1990, SCHWEIZER / SCHNEGG / BERZBORN 1998, MARIN 2004).

Based on the difference between both approaches, different data collection and analysis methods are applied. Complete network analysis is mostly based on graph theory or matrix algebra, whereas ego-centric network analysis is mainly based on descriptive statistics (WASSERMAN / FAUST 1994, SCHNEGG / LANG 2002, JANSEN 2006).

2.3.3 The links between social networks, social support and personal relationships

Social network research often overlaps with themes concerned with social support and personal relationships.

The term *social support* widely includes support provided formally or informally by individuals, groups and institutions (e.g. church, government). Within the network approach, social support mostly refers to resources that are provided by one person to another and vice versa. There are various terms used for different types and functions of support. However, they all include some mentioning of tangible and instrumental

help, emotional and informational support (BERG / KELLY 1990: 140). The most frequent sources of social support are persons with whom close relationships are shared. Thoughts, emotions and behaviours of each 'support-giver' and 'support-receiver' as well as external events and conditions influence the interaction and transaction between people (CUTRONA / SUHR / MACFARLANE 1990: 30-32).

The theory of *personal relationships* originates from fields of sociology, communication and psychology. PARKS (2007: 24-26) argues that the core of relationships lies in communication. Relationships "are made, unmade and remade in the communicative practices of their participants" (PARKS 2007: 24). In this context, communication is not only defined by its linguistic form but also by the process of humanitarian interaction and its consequences. Relationships further exist in emotions, physical states, reflections, expectations, and memories as well as roles, rules, symbols and rituals of culture. From a social and psychological perspective, relationships are defined by interdependence and mutual influence, their depth or intimacy of interactions, the variety of interaction and commitment between both partners, predictability and understanding, communicative code change during time and the frequency or amount of communication (PARKS 2007: 26-27).

Within *network* research, relations between two actors are commonly characterised by their duration, their role or label (e.g. kin, friend, neighbour, colleague), their intimacy (closeness of both actors), their intensity (frequency of interaction between both actors) as well as their contents of interaction (e.g. personal or material support) and the amount and mutuality of interaction (GRANOVETTER 1973: 1361, BERG / KELLY 1990: 142, SCHNEGG / LANG 2002: 15-16). Furthermore, relationships can be categorised according to their multiplexity (WELLMAN 1981: 184, BERG / KELLY 1990: 141, SCHNEGG / LANG 2002: 28-29). Network ties are multiplex when more than one type of interaction exists between two actors (e.g. the exchange of money, food and groceries between two people). If the relationship is only defined by a single type of interaction, the tie is uniplex (e.g. the exchange of only money between two people).

Based on the collection method, network relations are differentiated between potential and actual relations (ECKENRODE / GORE 1981: 55, SCHNEGG / LANG 2002: 16). Potential relations between actors are examined with hypothetical questions regarding future situations (e.g. **Suppose** you need sugar and the shops are closed. Who would you ask to lend you some?). Actual relations between actors refer to situations that, in fact, happen or had happened in the past (e.g. **When you last** ran out of sugar, who did you ask to lend you some?)

All three constructs, social network, social support and personal relationships, are interwoven with each other in several ways. In the following, each construct will be described with its linkages to the other constructs, drawing on concepts of MORGAN

(1990), WELLMAN (1981) and PARKS (2007). Moreover, aspects of the life cycle and events will be included, as can be seen in Figure 2.3.2:

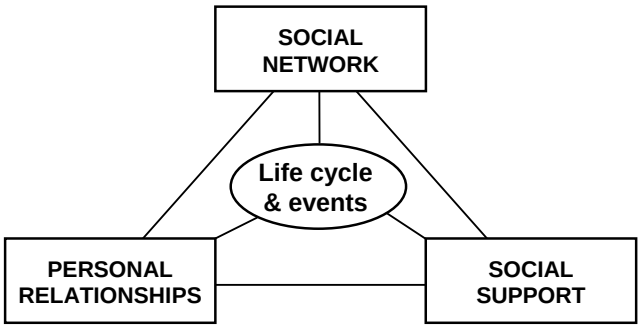


Figure 2.3.2: Relations between social network, social support and social relationships, incorporating the life cycle and life events

Social network research explores the structure of a set of relationships. Thus, *personal relationships* are the basis of each network. These relationships are characterised by ties between different actors representing several contents or interactions, like material or non-material exchange. Clearly, *social support* is one specific content domain in relationships between actors (WELLMAN 1981: 179-180) MORGAN 1990: 193-194).

Social support can be regarded as an outcome that people receive from *relationships* (MORGAN 1990: 195). The supportive content of relationships influences not only the relationship itself (PARKS 2007: 52), it further operates across the full set of relationships that make up a social network. *Social network* research sheds light on the availability of support, considering the structure and composition of the larger social network (MORGAN 1990: 197).

The nature of **personal relationships** as well as the development and process of relationships determine the type of *social support*. The perspective of personal relationships, however, only focuses on a dyadic interplay in a single relationship at any given time. Since a network is defined as a set of relationships, it inherently links partners of a relationship to other actors and thus relationship structures emerge (MORGAN 1990: 199-200). In turn, social networks can influence the initiation, development, maintenance and dissolution of any given relationship within it (PARKS 2007: 52).

Time aspects, including different **life stages and life events** directly influence *personal relationships* and thus, changes within the *social network* can occur. Moreover, types and resources of *social support* are adapted to different life stages and events. For instance, during times of negative life events, social support sources can function as coping strategies (WELLMAN 1981: 180, MORGAN 1990: 195, PARKS 2007: 53).

2.3.4 Bonds and bridges: The role of strong and weak ties

The theory of weak and strong ties draws on the groundbreaking work of GRANOVETTER (1973), entitled 'The strength of weak ties'. To define the 'strength' of ties (relations), a combination of the amount of time, emotional intensity, intimacy and reciprocity is taken into account. Based on a network analytical approach, GRANOVETTER argues that strong ties tend to be more concentrated within a particular group, while weak ties are more likely to link members of different small groups. If weak ties function as a bridge, providing the only path between two points (individuals or groups), they create more and shorter paths between social entities and thus reach a larger number of people and pass through a greater social distance. Weak ties are thus an important resource to achieve social and economic mobility of individuals, enhancing opportunities and their integration into the community or larger society.

Figure 2.3.3 exemplifies the role of weak and strong ties between different groups. Strong ties build 'close-knit' networks of individuals resulting in small groups (groups A, B & C) which are often characterised by trust, solidarity and social cohesion. However, within the larger frame, these small groups are isolated from each other, presenting rather immobile fragments. Weak ties, on the other hand, connect small groups and thus permit more mobility and opportunities to the individuals within the groups (GRANOVETTER 1973: 1376, 1379). By connecting these small groups, they also decrease the fragmentation which leads to more social organisation and thus enables the mobilisation of more resources to achieve collective goals. In particular the spread of information is enhanced by weak ties bridging the small groups (GRANOVETTER 1973: 1373-1375). The strong ties, for instance in group A, allow a fast spread of information within the group. However, the entry of new information is limited because of the relative isolation of the group towards other groups. The weak tie between group A and B enables a wider circulation of information between the two groups. Since group B is further connected with group C, there is an increased chance that information from group C will indirectly reach group A, too.

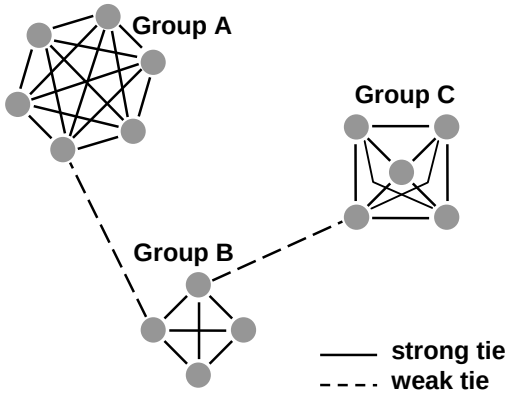


Figure 2.3.3: Illustration of strong and weak ties between different groups

More than two decades later, NARAYAN (1999) draws on Granovetter's theory, linking it with state functions and policies. In his paper 'Bonds and bridges', he discusses the positive and negative consequences of social capital. Social capital, characterised by social control and norms, solidarity as well as family and extra-family support, affects a broad range of positive outcomes concerning education, economic and social achievements, health, performances, and collective action at the community level. Contrariwise, a negative consequence of social capital is social exclusion, because "the same ties that bind also exclude" (1999: 5). Here, social exclusion refers to processes that "exclude certain groups from full participation in the social, economic, cultural and political life of societies" (1999: 4). Other negative outcomes of social capital can be corruption and cronyism, when tightly knit social groups get so powerful that they are generally not accountable to citizens anymore (e.g. the Mafia). NARAYAN (1999) sums up that a society characterised by strong social groups with rich social capital can still encounter poverty, corruption and conflict. NARAYAN (1999) then argues that voluntary and dense cross-cutting ties, though not necessarily strong, connect people and enable them to access different information, resources as well as economic and social opportunities. Moreover, connecting people from different backgrounds decreases the likelihood that social differences will grow into social cleavages (NARAYAN 1999: 5).

Including the perspective of state function into the discussion, he states that social capital impacts the governance environment and efficiency. In societies where cross-cutting ties connect primary social groups, economic prosperity and social order are more likely to be prevalent. In this case, good governance and social capital complement each other. Contrarily, in societies with disconnected primary social groups, the more powerful groups dominate the governance structures, leading to the exclusion of others. A state with dysfunctional and inefficient governance will then be substituted by informal social groups which are likely to impose struggles of poverty, crime and violence on the society (NARAYAN 1999: 5).

3 AT A GLANCE: SOUTH AFRICA, THE NORTH WEST PROVINCE AND THE SITUATION OF FARM DWELLERS

To comprehend the full extent of food security, livelihoods and social networks of South African farm dwellers, it is necessary to understand the general South African situation as well as the agricultural environment, including the current economic, political and social situation. This chapter will provide an overview on South Africa in general and will then describe the agricultural sector and the situation of farm dwellers.

3.1 South Africa and the North West Province

South Africa's historical and contemporary situation shapes the state of farm dwellers' lives in the country. This chapter will provide a brief historical outline, followed by the geographic, demographic and socio-economic characteristics, and the health and nutrition situation. Moreover, the specific family and household structures in South Africa as well as the position of women in South African society, will be illustrated.

3.1.1 A brief outline of South Africa's history

The earliest historically known inhabitants of South Africa were the San (Bushmen) and Khoikhoi (Hottentots), collectively known as Khoisan. They were hunter-gatherers and herdsmen, and lived in the southern part of the continent for thousands of years. Around 300-350 AD, Bantu-speaking people moved southwards from West Africa to Southern Africa, bringing with them iron-age culture, herding and domesticated crops. Later, chiefdoms were established by different groups or families of indigenous people based on control over cattle, building a system of patronage and hierarchies of authority within communities (BURGER 2009: 29).

In the 15th century, Portuguese seafarers who pioneered the sea route to India regularly visited South Africa's coast. On April 6, 1652, a victual station for the passing sea trade was established at the Cape of Good Hope by Jan van Riebeeck on behalf of the Dutch East India Company. To respond to the colonists' high demand for labour, slaves were imported from the East Indies, Madagascar and East Africa. When colonists started to spread into the hinterland, more and more indigenous inhabitants were dispossessed and incorporated into the colonial economy as servants (BURGER 2009: 29). Between 1816 and 1828, Shaka Zulu created the Zulu kingdom, conquering a considerable area in South-East Africa and bringing many chiefdoms under his domination. During the 17th and 18th centuries, a series of wars followed, known as the Cape Frontier Wars, leading to the conquest first over the Khoisan, then over the Xhosa-speaking chiefdoms and later over the Zulu people, along with the dispossession of their land (THOMPSON 2000: 80-86, BURGER 2009: 30).

In 1795, the British occupied the Cape region. As a result, large numbers of the original colonists, the so-called Boers, moved inland, a movement that became known as the Great Trek. From the mid-1800s, these Voortrekkers (as they were later called) coalesced in two land-locked white-ruled republics, the South African Republic (Transvaal) and the Orange Free State (THOMPSON 2000: 87-96, BURGER 2009: 30-31). The discovery of diamonds in 1867 in the area around Kimberly, and gold in the Witwatersrand goldfields in 1871, changed the socio-political and economic path of South Africa forever. The mining interest promoted the development of the railway system and the general emergence of a modern industrial state (BURGER 2009: 32). Following the mineral revolution, in 1899 a bitter guerrilla war began between the British and the Boers, also known as the Anglo-Boer war. In 1902, the Boers were defeated and agreed to come under sovereignty of Britain. In 1910, the Union of South Africa was created through the merging of the colonies of the Cape and Natal, and the Republics of Orange Free State and Transvaal (THOMPSON 2000: 141-153, BURGER 2009: 33-34).

The mining industry required a massive scale of labour which could only be provided by black South Africans. Hence, white authorities designed laws of land dispossessions, taxation and pass laws to ensure labour supply and to undermine black competition on the land. In 1913, the Natives' Land Act divided South Africa into black and white areas, forming the cornerstone of the later apartheid. Black people were forced to live in reserves which comprised only 13 percent of South Africa's land surface. Land purchases and land tenancy outside these reserves were declared as illegal for black South Africans. In 1923, The Natives (Urban Areas) Act, entrenched urban segregation and controlled the mobility of black people by pass laws. The rights of black people were systematically stripped while the political power of Afrikaners (descendants of mainly Dutch colonists) grew (THOMPSON 2000: 163-170, BURGER 2009: 33-35).

In 1948, the National Party representing Afrikaner nationalism came into power with the ideology of apartheid. A series of restrictive laws were introduced to benefit the white minority and ensure inferior amenities for Blacks, Asians and Coloureds. In 1950, the Population Registration Act classified people according to race and another law prohibited interracial sexual activities. The Group Areas Act of 1950 defined where people could or could not live. In a final consolidation of apartheid, the non-urban black areas were patched together into 'homelands' or 'Bantustans' to create separate putative 'nation states' for the different 'ethnic groups'. Forced removals from 'white areas' affected about 3.5 million people: mostly black, Asian or coloured South Africans. Pass laws and influx control were extended and harshly enforced to channel labour to where it was needed (THOMPSON 2000: 193-194, BURGER 2009: 36).

During apartheid, a number of non-violent and violent resistances through mass-based organisations appeared, including those led by the African National Congress (ANC) and the Pan-Africanist Congress (PAC). In 1943, African political opposition was evolving with the launch of the ANC Youth League, fostering the leadership of figures

such as Nelson Mandela, Oliver Tambo and Walter Sisulu. A sustained revolt against apartheid started in 1976, when school pupils in Soweto demonstrated against apartheid education, followed by youth uprising all around the country. In the following years, mass resistance increasingly challenged the apartheid government which eventually recognised that apartheid could not be sustained (THOMPSON 2000: 221-240, BURGER 2009: 36-38).

In 1990, negotiations between the government and anti-apartheid groups started. Mandela, who had maintained a tough negotiating stance on the issue, was released after 27 years in prison and a wide range of political groups started negotiating the end of white minority rule. South Africa's first democratic election was held in April 1994 with victory going to the ANC and Nelson Mandela becoming President. His presidency was characterised by the successful negotiation of the new constitution (THOMPSON 2000: 247-264, BURGER 2009: 38-39). In the country's second democratic election in June 1999, the ANC marginally increased its majority and Thabo Mbeki became President. In the 2004 election, the ANC won the national election with 69.7 percent of the votes and Thabo Mbeki was appointed President for a second term (BURGER 2009: 40). In September 2008, the ANC's National Executive Committee requested the recall of Mbeki as the country's president. After Mbeki's official resignation, the Parliament elected Kgalema Motlanthe who was President until the 2009 elections. The recall of Mbeki came along with tensions and splits within the ANC, leading to the formation of a new political party, the Congress of the People (COPE) by former ANC members in December 2008. During the country's fourth general election in April 2009, the ANC won the majority of votes and Jacob Zuma became President (MAIL & GUARDIAN 2009a, b, c).

In 2010, South Africa will host the FIFA Soccer Word Cup which is the first ever held in Africa. It will be a milestone in the history of not only South Africa but Africa as a whole (BURGER 2009: 41-42).

3.1.2 Geography, demographic and socio-economic profile of South Africa and the North West Province

This chapter starts with a broad overview on South Africa's geography, followed by demographic information, including population statistics and levels of urbanisation. Then, the socio-demographic profile of South Africa will be illustrated, showing that South Africa has many attributes of a developed country but has striking figures of poverty and inequalities. The chapter will end with a brief outline of the geography, demographics and socio-economic characteristics of the North West Province, where the commercial farms which participated in this study are located.

Geography of South Africa

The Republic of South Africa is located at the southern tip of Africa, with a coastline that stretches more than 2,500 kilometres from the desert border with Namibia on the Atlantic coast in the North West southward around the tip of Africa and then northward to the border with Mozambique on the Indian Ocean in the North. The country shares long borders with Namibia and Botswana, it touches Zimbabwe, has a longitudinal strip border with Mozambique in the east, and lastly curves around Swaziland before rejoining Mozambique's southern border. The small country of Lesotho is completely surrounded by South African territory. Most of the country's low-lying costal zone is narrow, giving way to a mountainous escarpment that separates it from the high inland plateau, known as the Highveld. In the east, in the province of KwaZulu-Natal, a greater distance separates the coast from the escarpment, called the Lowveld. The country has two major rivers, the Limpopo and the Orange with its tributary, the Vaal East (BURGER 2009: 6, SOUTH AFRICA.INFO 2010).

Covering 1.2 million square kilometres, the country has a variety of climate zones as well as topography. The great inland Karoo plateau, where rocky hills and mountains rise from sparsely populated scrubland, is very dry, extremely hot and can be icy in winter. In contrast, the eastern coastline is lush and well watered. The southern coast is rather less tropical but also green, especially in winter. The south-western corner of the country has a Mediterranean climate, with wet winters and hot dry summers. The main climate characteristic of this region is its wind which blows virtually all year round (BURGER 2009: 6, SOUTH AFRICA.INFO 2010).

The administrative capital of South Africa is Pretoria (now named Tshwane), the legislative capital Cape Town, and the judicial capital Bloemfontein. The country's biggest city is Johannesburg. South Africa comprises nine provinces; The Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Mpumalanga, Limpopo, Northern Cape, North West, and Western Cape (BURGER 2009: 7-24, SOUTH AFRICA.INFO 2010). A map of South Africa's provinces can be seen in figure 3.1.1.

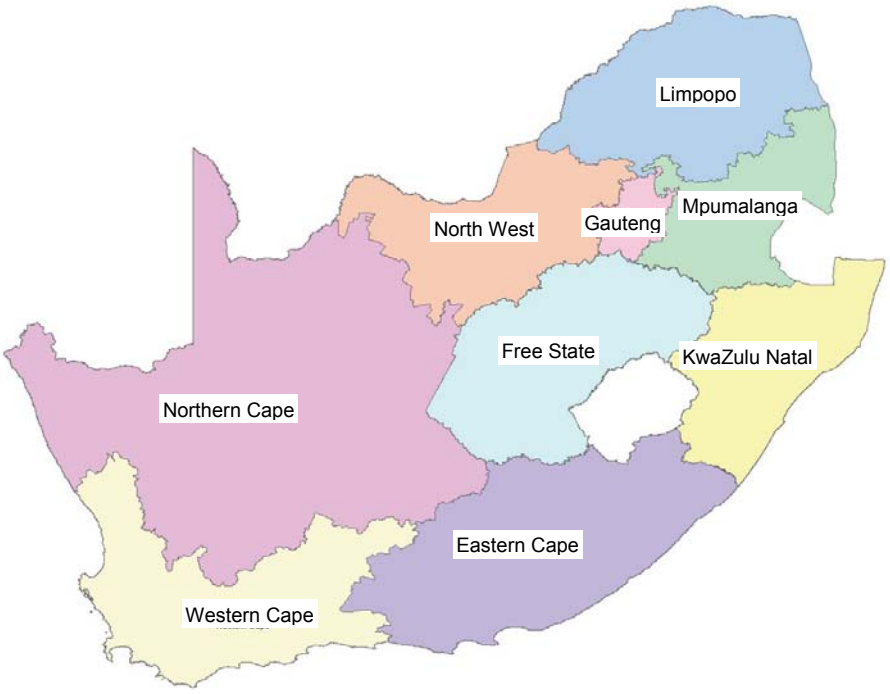


Figure 3.1.1: South Africa and its Provinces (adapted from STATS SA 2009f: 7)

Demographic profile and urbanisation

South Africa is a nation of over 49 million people of diverse origins, cultures, languages and beliefs. By far the major part of the population is African but it is not a culturally or linguistically homogeneous group. As described by BURGER (2009: 2), South Africa has eleven official languages, namely Afrikaans, English, isiNdebele, isiXhosa, isiZulu, Sesotho sa Leboa, Sesotho, Setswana, siSwati, Tshivenda and Xitsonga. South Africa's white population comprises mostly Afrikaans and English-speaking people. The majority of the coloured population group speaks Afrikaans. South Africa also has a high share of Asians with most of them being of Indian origin. They are mainly English-speaking, although many also retain the language of their origins. English is the language most widely understood, although it is the mother tongue of only 8.2 percent of the population. However, the majority of South Africans speak English as their second language (BURGER 2009: 2).

According to the mid-2009 estimates from Statistics South Africa (Stats SA 2009), black South Africans form the majority of the country's population with 39.1 million, constituting 79.3 percent of the total population. The white population is estimated at 4.5 million (9.1%), the coloured population at 4.4 million (9.0%) and the Indian/Asian population at 1.3 million (2.6%). Gauteng and KwaZulu-Natal have the largest share of the population with, respectively, 21.4 and 21.2 percent of South Africa's people living there. The Free State and the Eastern Cape have the smallest population, with 5.9 and 2.3 percent of the total population (STATS SA 2009a: 3-4).

According to KOK and COLLINSON (2006), more than half (56.3%) of the population was estimated to be living in urban and 42.8 percent in rural areas in 2001. These percentages vary considerably by provinces. At one extreme, 96 percent of Gauteng residents live in urban areas, compared to only 10 percent of Limpopo's residents. The non-urban population in South Africa mainly consists of black people. While only 47 percent of black South Africans were urbanised in 2001, more than 85 percent of the other categories were living in urban areas. The Indian/Asian population was almost fully urbanised at 97 percent (KOK / COLLINSON 2006: 19-22).

Migration plays an important role in South Africa's demographic process. Between 2006 and 2011, the net out-migration for the Eastern Cape and Limpopo is estimated to reach 390,000 and 200,000 people, respectively. The inflow of migrants into Gauteng and Western Cape is estimated to be approximately 450,000 and 140,000 people, respectively (STATS SA 2009a: 3).

Socio-economic profile: Poverty and inequality in South Africa

South Africa is a middle-income country and has the largest economy in Africa. In many respects, South Africa can be characterised as a developed country, having a modern infrastructure and relatively well developed financial, legal, welfare, communication, energy and transport systems (BURGER 2009). However, past policies of segregation and discrimination have left a legacy of inequality and poverty, affecting mostly black South Africans (WOOLARD 2002: 6). Since the beginning of democracy and the ruling power of the ANC, several political frameworks were produced to transform South Africa into a country with equal opportunities for all its citizens. Most important among them is the Reconstruction and Development Programme (RDP), the Growth, Employment and Redistribution strategy (GEAR) (THOMPSON 2000: 278-282) and the Broad Based Black Economic Empowerment Act (BBBEE) (SA DTI 2003). Nevertheless, numerous studies in post-apartheid South Africa have shown that the country has one of the most skewed distributions of wealth, extremely steep earning inequality, weak access to basic services by the poor, high rates of unemployment and underemployment, low economic growth rates, environmental degradation, a high prevalence of HIV/AIDS and inadequate social security systems (MAY 2000, WOOLARD 2002, UNDP 2003, BHORAT / KANBUR 2006, FRYE 2008). Up to today, South Africa's inequality comprises extreme poverty, hunger and overcrowding side-by-side with wealth and affluence.

South Africa's labour market is highly segmented. According to the third quarter 2009 Labour Force Survey (STATS SA 2009b: vi), only 41.3 percent of the working-age (15-64 years) population are employed. Of those employed in 2009, 70.4 percent are in the formal non-agricultural sector, 5.1 percent in formal (commercial) agriculture, 15.5 percent in the informal sector (unregistered businesses) and 9.0 percent in private households. The official unemployment rate in South Africa (defined as the proportion

of labour force that had actively sought work during the previous four weeks) is 24.5 percent. Taking the 'broad' definition (including those who want to work but have become discouraged from actively looking), unemployment accounts for up to 31.1 percent. While 28.8 and 21.6 percent of blacks and coloured South Africans, respectively, are unemployed, this applies to only 4.8 percent of white South Africans (STATS SA 2009b: vi, xi).

According to the Development Indicators of THE PRESIDENCY (2009: 2,5), South Africa's real Gross Domestic Product (GDP) per capita is ZAR 26,695 and the growth in real GDP has slowed down from 5.4 percent in 2006 to 3.1 percent in 2008 due to the significant deterioration of the global economy and the tighter domestic policy environment. Poverty is closely correlated with race in South Africa. The mean per capita income is ZAR 1,631 with striking differences in the population. Black South Africans earn the lowest mean per capita income with ZAR 846, followed by Coloureds with ZAR 1,495. The highest per capita income is earned among the white population with ZAR 8,141 (THE PRESIDENCY 2009: 23). This income inequality is further reflected by South Africa's high Gini-coefficient[3], showing a value of 0.7 which is one of the highest in the world. Moreover, a high share of the population lives in poverty, 49 percent live under the poverty line of ZAR 524 per month (THE PRESIDENCY 2009: 25-27). Findings of the Income and Expenditure Survey 2005/06 (STATS SA 2008a) reveal that the black population group (79.4% of the population, 76.8% of households) receives 41.2 percent of national household income, while the white population group (9.2% of the population, 12.8% of households) receives 45.3 percent of income. The coloured population group (8.8% of the population, 7.8% of households) receives 8.6 percent of income and the Indian/Asian population group (2.5% of the population, 2.5% of households) 4.8 percent of income. Thus, the white population's share of household income is five times their share of the population, while the black populations' share of household income is approximately half their population share (STATS SA 2008a: 33-34).

South Africa has a well functioning social assistance system. It provides non-contributory old-age pensions, disability grants, care dependency grants, foster child grants, child support grants, and war veterans' grants (NATRASS 2007, FRYE 2008). The spending on social assistance grants in 2009 was ZAR 69 billion which is 5.5 percent of the GDP. Over 13 million South Africans receive social grants. The majority of them, 8.8 million, are recipients of the child support grant and 2.4 million are recipients of the old age pension (THE PRESIDENCY 2009: 28). Generally, the poorest households are highly dependent on social grants as a source of income and, hence, the state plays an important role in supplementing the incomes of poorer households through these various state grants (STATS SA 2008a: 32).

[3] The Gini-coefficient is a measure of income inequality that ranges between 0, indicating perfect equality, and 1, indicating complete inequality (THE PRESIDENCY 2009: 27).

According to the General Household Survey 2008 (STATS SA 2008b: 6), 29.1 percent of South Africa's households do not have water pipes in their dwelling or on site, 17.4 percent do not have access to electricity and 13.4 percent live in informal dwellings. In particular, poor households - mainly back - lack access to basic services such as formal housing, adequate sanitation and clean water (FRYE 2008: 17-18).

Formal education in South Africa is presently reaching the vast majority (97.9%) of children between the ages of seven and 15 years (STATS SA 2008b: 13). However, with regard to school qualification, striking differences between population groups come to the fore. While 38.8 percent of Whites over 20 years of age have finished Grade 12 and 16.7 percent have received a university degree, only 20.9 percent and 1.9 percent of black South Africans, respectively, have done so (STATS SA 2008b: 56). The illiteracy rate among South Africans was 25.9 percent in 2007 (THE PRESIDENCY 2009: 48).

North West Province: Geography, demographic and socio-economic characteristics

The North West Province is bordered by Gauteng and the Limpopo Province in the east, the Northern Cape in the west (see figure 3.1.1, p. 25), the Free State in the south and Botswana in the north. The capital city of the North West Province is Mafikeng, which is also where the provincial legislature is situated. Potchefstroom and Klerksdorp are the biggest cities in the province. North West currently comprises four district councils, namely Bophirima, Southern, Central and Bojanala (BURGER 2009: 17-18).

The North West Province is the fifth largest in South Africa, covering a total area of 116 320 square kilometres, accounting for 9.5 percent of South Africa's total land area. The province has a population of 3.4 million people, making up 7.0 percent of South Africa's total population (STATS SA 2009a). The majority of the provincial population is black (90.8 percent), while white people make up 7.2 percent, coloureds 1.6 percent and Asians 0.4 percent (STATS SA 2007). The province has the third lowest population density with 32 people per square kilometre (STATS SA 2004). Principal languages of North West are seTswana (65.4%), Afrikaans (7.5%) and isiXhosa (5.8%) (BURGER 2009: 18).

According to South Africa's Yearbook 2008/09 (BURGER 2009: 18-19), the North West is a predominantly rural province, with 65 percent of the population living in rural areas. The Province is richly endowed with mineral resources such as platinum, gold, diamonds and chrome. Next to mining, agriculture and tourism are the most important sectors of the provincial economy. However, despite being fortunate with such a rich array of natural resources, the North West is one of the poorer provinces in South Africa with 23.0 percent of its people having lived under the poverty line (less than ZAR 283.0 per month) in 2008 (THE PRESIDENCY 2009: 26-27). The provincial

contribution to the national economy counted for 6.5 percent in 2008. The average real annual economic growth rate of the North West between 2002 and 2008 was 4.0 percent, below the national average rate of 4.6 percent (STATS SA 2009c: 17-18). The provincial official unemployment rate is with 27.9 percent, higher than the national average of 24.5 percent (STATS SA 2009b: x). According to the General Household Survey 2008 (STATS SA 2008b: 5), the North West had the highest percentage of households living in informal dwellings (23.1%). This is most likely related to subsidy policies in the mining sector where workers not living in hostels receive a subsidy, resulting in the growth of informal settlements around the mining areas. In 2001, the literacy rate in the North West was relatively low with a percentage of 70.1 (STATS SA 2004: 40).

3.1.3 Health and nutrition situation of the South African society

In the following chapter, South Africa's health situation and nutrition security at the national level will be discussed, highlighting the double burden of malnutrition in South Africa. This chapter will close with an outline of the health and nutrition situation in the North West Province.

Health situation at the national level

According to the Development Indicators for 2009 (THE PRESIDENCY 2009: 36), the life expectancy of the South African population is 54.6 years for women and 50.5 for men, based on the Actuarial Society of South Africa and Statistics South Africa (STATS SA), respectively. The report also reveals a trend of increasing mortality since 2000, especially among the young. This is most likely related to the increasing HIV prevalence after 1998, although this has stabilised in recent years (THE PRESIDENCY 2009: 36). The South African Health Review 2008 (DAY / GRAY 2008: 296-297) reports that the death rate for 2006 was estimated at 14.3 per 1,000 (based on the Community Survey of STATS SA 2007). Table 3.1.1 indicates the top ten causes of death in South Africa in 2000.

Table 3.1.1: Top ten underlying causes of death in South Africa, 2000

Rank	Causes of death	Percentage of deaths
1	HIV and AIDS	25.5
2	Ischaemic heart disease	6.6
3	Stroke	6.5
4	Tuberculosis	5.5
5	Interpersonal violence injury	5.3
6	Lower respiratory infections	4.4
7	Hypertensive disease	3.2
8	Diarrhoeal diseases	3.1
9	Road traffic injury	3.1
10	Diabetes mellitus	2.6

Source: BRADSHAW et al. 2003

The top single cause of deaths among South Africans is related to HIV and AIDS with about a quarter of all deaths attributed to the virus. According to UNAIDS and WHO (2009), 5.7 billion people in South Africa are infected with HIV (11.7% of the total population) and the HIV prevalence among adults between 15 and 49 years was 18.1 percent in 2007. The number of AIDS orphans (0-17 years) is 1.4 billion. HIV/AIDS does not only have devastating impacts on individuals, it also impacts on the economy. In 2007, South Africa spent 480.2 million USD from domestic sources on HIV/AIDS related costs (UNAIDS / WHO 2009: 3-6). The HIV prevalence among adults from 15-49 years was highest among the black population with 16.0 percent in 2004. Nevertheless, HIV prevalence rates among Coloureds, Whites and Indians in the same year were estimated at 6.8, 5.6 and 2.7 percent respectively, dispelling the myth that HIV/AIDS is solely a 'black disease' (DAY / GRAY 2008: 315). Based on National Antenatal Sentinel HIV and Syphilis Prevalence Survey (SA DoH 2009: iv-v), it is estimated that the national HIV prevalence among ante-natal women aged 15 to 49 years was 29.3 percent in 2008. The occurrence of HIV infections among ante-natal women has stabilized nationally at around 29.0 percent from 2006. According to the Development Indicators for 2009, factors contributing to a stabilised HIV prevalence during the past years are voluntary counselling and testing, the distribution of condoms, the provision of antiretroviral therapy to more than 630,775 patients by November 2008 and the introduction of a new dual therapy policy in February 2008 for the prevention of mother-to-child transmission (THE PRESIDENCY 2009: 41). MATJILA et al. (2008: 91) point out that the major drivers of HIV infections in South Africa are high risk heterosexual behaviour (e.g. multiple concurrent sexual partners, unprotected intercourse, sexual relations with persons of unknown HIV sero-status), high levels of

sexually transmitted infections (STIs), population mobility patterns, recreational drug and alcohol use, high HIV viral loads associated with recent HIV infections or advanced HIV disease and high levels of vulnerability due to poor socio-economic conditions.

Tuberculosis (TB) is another infectious disease of major concern in South Africa. In 2007, there were 336,328 notified TB cases in South Africa with a cure rate of 63 percent (THE PRESIDENCY 2009: 42). MATJILA et al. (2008: 94) discuss that the prevalence rates of TB in southern Africa are the highest in the world. Key contributing factors to the spread of TB are most likely migrant labour linked to the discovery of diamonds and gold, the industrialisation of what is now called Gauteng in the 1880s and the spread of HIV in the population in the 1990s. Moreover, increasing migration and rapid urbanisation, together with social factors such as unemployment, crime and social and economic hardship make it hard to control the epidemic (MATJILA et al. 2008: 94).

South Africa's rapid urbanisation has been further accompanied by large shifts in health patterns, thus increasing the prevalence of non-communicable diseases. Lifestyle factors, such as poor diets, physical inactivity, tobacco use and inappropriate alcohol use, are among the main factors contributing to this increase. Among the top ten diseases and conditions contributing to mortality (see table 3.1.1) are the following non-communicable diseases: ischaemic heart disease, stroke, hypertensive disease and diabetes mellitus. These diseases have resulted in the loss of 65,000 lives per year (PUOANE et al. 2008: 75-78).

Unnatural deaths, for example caused by interpersonal violence and road accidents were among the ten most common causes of deaths of South Africans in 2000. The Community Survey 2007 (STATS SA 2007: 59) reported that about 15 percent of all deaths were due to unnatural causes, especially prevalent among young male South Africans.

The high numbers of poverty-related illnesses, such as TB, lower respiratory infections and diarrhoeal diseases (see table 3.1.1), reflect that the vast majority of South Africans have only limited access to adequate sanitation and health services.

MHLANGA (2008) highlights that based on current progress of reducing childhood deaths, South Africa is one of the countries not on track to meet the Millennium Development Goal in relation to under-five mortality, having an estimated 68 child deaths per 1000 live births (THE PRESIDENCY 2009: 37). HIV is the single largest contributor to childhood mortality and is linked with malnutrition, both compromising the immune system. Other significant diseases are respiratory tract infections and diarrhoeal diseases which could be largely preventable through environmental improvements and development initiatives, such as adequate access to safe water, sanitation, reductions in exposure to indoor smoke, improved personal and domestic hygiene as well as comprehensive primary care (BRADSHAW / NANNAN 2004, MHLANGA 2008: 121).

Food and nutrition situation at the national level

In South Africa, two national food consumption surveys (NFCS) were conducted in 1999 and 2005, providing detailed data on the nutritional status of children in the country (LABADARIOS 2000, LABADARIOS et al. 2008).

The most adequate current overview of food consumption and procurement patterns is given by the 1999 NFCS. MAUNDER and LABADARIOS (2000: 496-497) report that maize and sugar are the two most frequently and consistently consumed foods in the country, followed by tea, whole milk, brown bread, rice and margarine. Most households primarily purchase these items in supermarkets and to a much lesser extent in smaller shops. Subsistence agriculture is not a major source of these foods in the country. Household income appears to be the decisive factor in the consumption and procurement of food. The average number of food items found in South African households is nine, indicating widespread food insecurity (MAUNDER / LABADARIOS 2000: 502).

In 2005, the most common nutritional disorders at national level were stunting and underweight, affecting 18.0 percent and 9.3 percent of children respectively (LABADARIOS et al. 2008: 255). Prevalence rates of stunting and underweight are highest in rural areas (CHOPRA / WHITTEN / DRIMMIE 2009: 9, based on NFCS 2005-data). Comparing results of both NFCSs reveals that prevalence rates of stunting and underweight only marginally decreased and rates of wasting increased from 1999 to 2005 (see table 3.1.2).

Table 3.1.2: National prevalence of malnutrition among children (1-9years) (in %)

Anthropometric status	**1999**	**2005**
Stunting (%H/A<-2SDs)	21.6	18.0
Underweight (%W/A<-2SDs)	10.3	9.3
Wasting (%W/H<-2SDs)	3.7	4.5
Overweight (%W/H<+2SDs)	6.0	4.8

Source: adapted from SWART, SANDERS & MCLACHLAN 2008: 133, based on NFCS 1999 and 2005

The prevalence of overweight based on waist for height z-scores in children is 4.8 percent and has slightly decreased from 1999 to 2005 (see table 3.1.2). However, when using Body Mass Index (BMI) cut-off points proposed for international use, ten percent of South Africa's children are classified as overweight and four percent as obese (CHOPRA / WHITTEN / DRIMMIE 2009: 9, based on NFCS 2005-data).

The NFCS 2005 further used biochemical analysis to determine the micronutrient status of children and found that iodine and folic acid status appear adequate throughout the country (LABADARIOS et al. 2008: 260, 263). A matter of concern remains the inadequate vitamin A status, anaemia and zinc deficiency. As shown in table 3.1.3, almost two out of three (63.6%) and almost one out of three children (27.9%) have a poor vitamin A status and anaemia, respectively. Almost half of the children (45.3%) are lacking zinc.

Table 3.1.3: Prevalence of insufficient nutritional status among children (1-9 years) in 2005

Biochemical status	**Percentage of children** (1-9 years)
Inadequate vitamin A status (<20µg/dL)	63.6
Iron deficiency (Hb<11g/dL or 11.5 for >60 months and ferritin <12µg/L)	7.6
Anaemia (Hb<11g/dL ≤60 months, HB <11.5g/dL >60 months)	27.9
Zinc deficiency (<65µg/dL)	45.3
Iodine deficiency (% urinary iodine <20µg/L)	0.7

Source: adapted from SWART, SANDERS & MCLACHLAN 2008: 134, based on NFCS 2005

The poor nutritional status among children is mainly caused by a poor dietary intake and the prevalence of infectious diseases. As stated in the previous section, HIV/AIDS, diarrhoeal diseases and respiratory tract infections are largely linked with child mortality and thus also contribute to the poor health and nutritional status (MHLANGA 2008: 121). Furthermore, exclusive breastfeeding which greatly prevents a child's malnutrition is not widely practiced in South Africa. According to the South African Demographic and Health Survey in 2003, only 8.3 percent of babies under six months are exclusively breastfed (SA DoH 2007: 144).

The high levels of undernutrition among children have serious consequences for the economic development of South Africa. CHOPRA, WHITTEN and DRIMMIE (2009: 2) calculated that the present levels of stunting and vitamin A deficiency result in more than 10,000 extra child deaths annually and poor breastfeeding practices cause a further 7,312 child deaths. Moreover, they state, based on several longitudinal studies, that stunting and iron deficiency during infancy results in a loss of earning capacity in later life, mostly due to reduced physical stamina (CHOPRA / WHITTEN / DRIMMIE 2009: 2).

According to LABADARIOS et al. (2008: 259-260), hunger persists in South Africa. The NFCS 2005 indicates that half of households (51.6%) experience hunger and one out

of three is at risk of hunger. Only one in five households appears food secure. The study confirms that food insecurity is closely linked to poverty, indicating that households at risk of hunger or experiencing hunger tend to live in informal dwellings, have the lowest monthly income, spend the lowest amount of money on food and have lower educational standards of mothers (LABADARIOS et al. 2008: 259-260). These findings are in stark contrast with the 2008 General Household Survey (STATS SA: 40) which reports only 2.4 and 2.5 percent of households in which adults and children experience hunger, respectively.

In South Africa, food insecurity is not caused by an insufficient agricultural production or limited food availability. Most households, even in rural areas, are deficient food producers and their access to food is determined by the household's direct or indirect access to cash for purchasing food (CHOPRA / WHITTEN / DRIMMIE 2009: 15). Also, RULE et al. (2005: 81) argue that food insecurity in South Africa is largely determined by the lack of access to land and to other assets essential for food production, a small contribution of subsistence agriculture to household food needs, and a relatively great reliance on purchased food. As a result, CHOPRA, WHITTEN and DRIMMIE (2009: 2) argue that household food security in South Africa has been particularly exacerbated by increasing food prices during the past few years and the consequences of the HIV/AIDS pandemic. The recent global phenomenon of rising food prices has lead to 20 percent higher prices for grains, dairy, fats, oils and vegetables, mainly striking poorer South African households with most of them now spending more than 70 percent of their income on food. On the other hand, the serious HIV/AIDS pandemic in South Africa further hits vulnerable households with sickness and death with the consequence of reduced earnings and weakened capacity, and furthermore higher expenditures for providing care and treatment (CHOPRA / WHITTEN / DRIMMIE 2009: 2,15).

The South African Health Review 2008 (SWART / SANDERS / MCLACHLAN 2008: 135) reports that underweight among adult men and women is relatively uncommon with 4.6 percent of women and 8.0 percent of men having an BMI <18.5. Nevertheless, a poor micro-nutrient status has been found among women of reproductive age (16-35 years) with 27.2 percent having an insufficient vitamin A status (<20µg/dL) and 29.4 percent having anaemia (<12g/dL).

On the contrary, high levels of overweight or obesity are found among adults with 50.0 percent of young women and 30.0 percent of young men (16-35 years) being affected (SWART / SANDERS / MCLACHLAN 2008: 135). STEYN et al. (2006: 277-279) report that higher rates of overweight are found in urban areas and particularly among black women and white men. Among the main reasons for increasing rates of overweight and obesity are decreasing physical activity on the one hand and changes in dietary patterns on the other hand. VORSTER and BOURNE (2008: 237-239) argue that

urbanisation and modernisation of lifestyles in South Africa during the past 40 years resulted in changes of dietary patterns characterised by

- increased total and saturated fat intake,
- decreased total carbohydrate intake, but increased refined carbohydrate intake and added sugar,
- decreased fibre intake,
- increased total and animal-derived protein intake, and
- increased micronutrient consumption.

Accompanied by changes in lifestyles, such as physical inactivity, tobacco use and inappropriate alcohol use, the nutrition transition increases the risk of non-communicable diseases (STEYN et al. 2006: 282-294, VORSTER / BOURNE 2008: 238-242, SWART / SANDERS / MCLACHLAN 2008: 135, PUOANE et al. 2008: 75-78). This is also reflected by the top ten causes of death in South Africa (see table 3.1.1, p. 30), which include non-communicable diseases, such as ischaemic heart disease (6.6%), stroke (6.5%), hypertensive disease (3.2%) and diabetes mellitus (2.6%) (BRADSHAW et al. 2003).

With the coexistence of undernutrition linked with high rates of infectious diseases and increasing rates of overnutrition linked with chronic diseases, South Africa faces the double burden of malnutrition (CHOPRA / WHITTEN / DRIMMIE 2009: 13, STEYN et al. 2006: 295). Including the high burden of HIV/AIDS and injuries, STEYN et al. (2006: 295) speak about the 'quadruple burden' of disease in South Africa. Currently, several policies and strategies addressing nutrition problems exist in South Africa, for example the Integrated Nutrition Programme, the implementation of fortification schemes, surveillance programmes on health indicators, a sport and recreation policy and the plan for comprehensive health care (SWART / SANDERS / MCLACHLAN 2008: 138-140). Nonetheless, the effectiveness of these strategies appears to be suboptimal to date and requires improvements in various aspects for better targeting nutritional problems in the society (SWART / SANDERS / MCLACHLAN 2008: 143, CHOPRA / WHITTEN / DRIMMIE 2009: 21-35).

Health and nutrition situation in the North West Province

Little detailed information on health and nutrition at provincial level is available. In the North West Province, life expectancy rates of men and women in the period 2006-2011 are 53.8 and 55.3 years, respectively, being in line with the national average (THE PRESIDENCY 2009: 36). With regard to HIV/AIDS, the North West has the fourth highest rates amongst antenatal women in South Africa with a prevalence of 31.0 percent. The antenatal HIV prevalence in this province increased from 29.0 percent in 2006 and 30.6 percent in 2007 up to 31.0 percent in 2008 (SA DoH 2009: 9, 21).

According to the NFCS 2005, the North West Province's rates of stunting (15.1%), underweight (12.4%), wasting (3.2%) and overweight (4.9%) are largely in line with the national averages of 18.0 percent, 9.3 percent, 4.5 percent and 4.8 percent, respectively. As shown in table 3.1.4, anthropometric measurements among children in the North West in 1999 and 2005 show a ten percent decline in prevalence rates of stunting while levels of underweight and wasting have only slightly decreased. Contrary to national trends, levels of overweight increased by about five times during that period. Compared to other provinces, the North West has one of the lowest levels of stunting and wasting in the country but one of the highest rates of underweight (CHOPRA / WHITTEN / DRIMMIE 2009: 9). It becomes clear that the North West Province, like South Africa as a whole, faces the double burden of malnutrition, having to deal concurrently with the consequences of under- and over-nutrition.

Table 3.1.4: Prevalence of malnutrition among children (1-9years) in the North West Province (in %)

Anthropometric status	**1999**	**2005**
Stunting (%H/A<-2SDs)	24.9	15.1
Underweight (%W/A<-2SDs)	15.3	12.4
Wasting (%W/H<-2SDs)	5.7	3.2
Overweight (%W/H<+2SDs)	0.9	4.9

Source: adapted from SWART, SANDERS & MCLACHLAN 2008, based on NFCS 1999 and 2005

Table 3.1.5 shows the nutritional status of children (1-9 years) in the North West Province based on the NFCS 2005. Almost half of the children (49.6%) have an insufficient vitamin A status; this is lower than the national level of 63.6 percent. Prevalence of iron deficiency (5.2%) and anaemia (28.1%) are almost equal to the national average (7.6% and 27.9% respectively) while iodine deficiency (4.6%) is more than four times higher compared to the national average (0.7%).

Table 3.1.5: Prevalence of insufficient nutritional status among children (1-9 years) in the North West Province (in %)

Biochemical status	**Percentage of children** (1-9 years)
Inadequate vitamin A status (<20µg/dL)	49.6
Iron deficiency (Hb<11g/dL or 11.5 for >60 months and ferritin <12µg/L)	5.2
Anaemia (Hb<11g/dL ≤60 months, HB <11.5g/dL >60 months)	28.1
Zinc deficiency (<65µg/dL)	41.1
Iodine deficiency (% urinary iodine <20µg/L)	4.6

Source: adapted from SWART, SANDERS & MCLACHLAN 2008, based on NFCS 2005

The THUSA (Transition and Health during Urbanisation in South Africa) study (VORSTER et al. 2000) reveals high socio-economic differences among black people living in different areas of the North West Province and the subsequent varying impact on health and nutrition. The inhabitants of the wealthiest urban areas are characterised by a superior nutritional status and the best physical and mental health. They show better health behaviours reflected in lower mean blood pressure, lower smoking prevalence, reduced alcohol consumption and low HIV infection rates. Farm workers are identified as the most vulnerable group, having the poorest nutritional status and mental health profiles. People living in informal housing areas known as 'squatter camps' and urban townships have the highest blood pressure, greatest HIV infection rates, higher smoking prevalence and alcohol consumption than others. Chronic diseases such as obesity, hypertension and diabetes as well as their risk factors are prevalent in most rural as well as urban areas (VORSTER et al. 2000).

Poverty and the high unemployment rate in the province are two primary factors that contribute to the sub-standard living conditions, particularly in rural areas, and result in food insecurity, malnutrition and poverty related diseases. LEMKE (2001) describes in her study on food security in black households in the North West Province that the majority of households have a very limited dietary diversity. More than one-third of the investigated households indicate that they experience hunger regularly, two thirds state that their children sometimes go hungry and three quarters of all households seem to have worries and problems about obtaining food. Overall, LEMKE (2001) identifies three quarters of households as chronically food insecure.

3.1.4 South African household and family structures

In South Africa, national household surveys and censuses (e.g. General Household Survey by STATS SA[4], Demographic and Health Survey by SA DoH[5]) provide large data-bases of income, expenditure, fertility, mortality, educational levels, health and various indicators of living standards. In most surveys and censuses, the household is defined as a co-residential unit in which resources, including food, are shared. For example, STATS SA defines a household as:

> "[…] a person, or group of persons, who occupy a common dwelling unit (or part of it) for **at least four nights in a week** on average during the past four weeks prior to the survey interview. Basically, **they live together and share resources as a unit.** Other explanatory phrases can be 'eating from the same pot' and 'cook and eat together'". (STATS SA 2008a: 51)

Various sociologists and anthropologists, however, are greatly concerned with the co-residence definition of households because it does not capture the social and cultural complexity of South African households, particularly black South African households (MURRAY 1980, ROSS 1996, SPIEGEL / WATSON / WILKINSON 1996, MOSER 1999, HOSEGOOD / TIMAEUS 2001, RUSSELL 2003). According to HOSEGOOD and TIMAEUS (2001: 4-5), it is a "researcher-imposed definition" that neglects a person's own sense of belonging and it fails to capture the complexity of black South Africans' domestic living arrangements, like the social reality of fluid household boundaries, high levels of individual and household mobility, non-resident household members, and multiple household memberships (HOSEGOOD / TIMAEUS 2001:2). RUSSELL further argues that the definition of household as a co-residential unit derives from "alien Western social practices" falsely assuming persistence and internal cohesion in co-residential groups (2003: 5).

To understand the different household structures in South Africa, it is important to acknowledge family traditions particularly between white European descendants and Africans. According to RUSSELL:

> "[…] the prevailing family tradition amongst white people is the conjugal couple, who are strongly expected to set up their own independent household in which they alone will rear their own dependent children to maturity. The African tradition […] is very different. Descent rather than marriage is the central principle; in southern Africa, patrilineal or agnatic descent, i.e. descent from father." (RUSSELL 2003: 8)

Although household structures of black families have essentially changed in the broader political and social environment of South Africa during the last century, agnatic structures still influence most black households (MURRAY 1980, HOSEGOOD / TIMAEUS

[4] Statistics South Africa; http://www.statssa.gov.za

[5] South African Department of Health; http://www.doh.gov.za

2001, RUSSELL 2003). Hence, boundaries of black South African households cannot be determined as easily as household boundaries of nuclear family patterns of white European descendants (RUSSELL 2003: 8).

Several sociological and anthropological micro-studies during the 1980s and 1990s revealed dramatic changes in black South African household structures caused by the capitalist development and the apartheid legacy in South Africa (for example, MURRAY 1980, SHARP / SPIEGEL 1985, ROSS 1996, SPIEGEL / WATSON / WILKINSON 1996, MOSER 1999). In particular, two aspects of the apartheid legacy fragmented traditional black household systems, resulting in domestic diversity and fluidity between household boundaries (SPIEGEL / WATSON / WILKINSON 1996). First, the labour migration system and influx control measures separated mainly male workers from their families for long periods of time (MURRAY 1980). Second, the Group Area Act forcibly dispossessed households of their land and livestock and relocated them in the 'Bantustan homelands' where they were often confronted with extreme poverty (SHARP / SPIEGEL 1985, VAN DER WAAL 1996).

As a result, many men had to work as migrant labourers to secure their family's survival (MURRAY 1980: 150). Remittances from migrant men were the main source of income for households in rural Bantustan settlements (for example, MURRAY 1980, SHARP / SPIEGEL 1985, VAN DER WAAL 1996). At the same time, the long absence of men resulted in conjugal instabilities, especially when men established new marital relationships or liaisons at their workplaces and neglected their family-support commitments (VAN DER WAAL 1996: 34).

According to MURRAY (1980: 140), the destructive consequences of labour migration created economic insecurity, marital disharmony and high rates of conjugal breakdown, emotional misery and problems relating to sexual morality, illegitimacy and instability in arrangements for rearing children as well as subverted authority of the senior generation through the concentration of earning capacity among younger men. Since life in urban areas was insecure through influx controls and limited access to land, migrants actively sustained their connections with their rural communities, retaining traditional values, because it secured them permanent access to land (MURRAY 1980: 141). Thus, two processes of 'family' constitution were determined. The first one is the "replication of inter-household residential alignments in terms of the prevailing agnatic idiom". The second refers to "rapid turnover in household membership as a result of the movement of migrants, the instability of conjugal unions and the dispersion of children to be reared by their grandparents and other kin" (MURRAY 1980: 147). Nevertheless, MURRAY argues that the agnatic idiom in its political context is not incompatible with the fact that individuals draw on paternal as well as maternal relatives in other contexts (MURRAY 1980: 153). This is of particular importance when coping with limited resources and poverty.

VAN DER WAAL (1996: 51) argues that the economic dependence of people in the Bantustans on resources beyond their control and the insecurity of their access to these resources are the main reasons for residential instability and domestic fluidity. The formation of fluctuating, open-ended and wide-spread social networks is seen as a response to the economic and conjugal instability experienced by people living in the Bantustans. Children especially, are the ones who had to suffer under these conditions because the circulation of children among different households secured the child's care, on the one hand, and the acquisition of income to maintain family members, on the other hand (VAN DER WAAL 1996: 51). Most mothers sent their children to foster parents either because they were single or because their husband provided little or no financial support. When possible, parents were expected to contribute financially to the fostering household but in most cases, mothers with little incomes were not able to do so. At the same time, foster children could contribute to the functioning of the fostering household. For example, teenage children were valuable sources of labour for aging or single people (VAN DER WAAL 1996: 42).

Another study by ROSS (1996) emphasises the domestic fluidity among poor households in an urban informal settlement. She found that micro-level relationships of production and consumption, and also to a much lesser extent reproduction, did not always occur within clear household boundaries. Instead, these relationships were spread across the settlement, linking individuals into complex and extremely fluid networks of support which rapidly changed (ROSS 1996: 66). ROSS calls attention upon:

> "[…] social relationships engendered around domestic functions are processes which are both continuous and in a state of temporal flux, and they do not necessarily reflect phases either household development cycles or personal life cycles. […] Domestic relationships in freestanding shacks thus spilled out into the settlement at large, cutting across household boundaries and weaving constantly altering relationships of interaction, co-operation and conflict into dense, short-lived social conglomerates". (ROSS 1996: 67)

Also, MOSER highlights the resourcefulness of black South African households to cope with poverty and constrained conditions "by managing household relations as assets over space and time" (MOSER 1999: iii). She points out four interrelated features of household relations to effectively mobilise household assets:

- Extended households, often over three or four generations, build a wide spread safety net providing refuge and care for particularly vulnerable members.
- Grandparents accept parenting responsibilities for their grandchildren to release the parents to earn income away from their place of residence. Thus, the middle generation is often incomplete or missing in many extended households.
- Mothers in women-headed households are not necessarily the biological mothers of the residing children. Often they are grandmothers, aunts or other female relatives taking primary responsibility of a group of children.

- Widespread foster care is used as an effective strategy to pool the burden of child care into available resources, shelter and the presence of adults (MOSER 1999: iii-iv).

MOSER further stresses that high levels of poverty, violence and social disintegration lead to constant movements, not only in and out of relationships but also spatially. While breaking up relationships or leaving dangerous areas may reduce stress and violence, it often leaves households with fewer assets, in particular relationships that could contribute to household income or chores (MOSER 1999: iv).

While high poverty rates and constrained living conditions are still prevalent among black people in contemporary South Africa, domestic diversity and fluidity retain fundamental household concepts. Therefore, to appropriately describe South African households, it needs to be acknowledged, first, that non-residents might be members of a household, second, that individuals may belong to more than one household and third, some individuals may fully belong to one household which does not function as a separate household (HOSEGOOD / TIMAEUS 2001: 6).

Being aware of the limitations of empirical data from censuses, AMOATENG, HEATON and KALULE-SABITI (2007) compare the General Household Survey of STATS SA in 1996 and 2001 to revisit the issue of family change and living arrangements in post-apartheid South Africa. They argue that changes in family structure are most likely caused by the government's transformation agenda in areas such as housing, education and health but also due to demographic changes under increasing urbanisation and the HIV/AIDS pandemic (AMOATENG / HEATON / KALULE-SABITI 2007: 44). In their findings, they reveal that family and household structures in South Africa are becoming more diverse, consistent with South Africa's multicultural character and in line with the rapid social, economic and political changes. Indeed, nuclear and extended family systems can be found side by side in the society. While the nuclear family system is clearly more popular among white and Asian people, the extended family system is mostly identified with black and coloured people. However, they also note that the occurrence of multigenerational living arrangements amongst white people might increase because most of the socio-economic privileges they enjoyed under apartheid are now disappearing. AMOATENG, HEATON and KALULE-SABITI (2007: 51-52) further disclose that living arrangements of poor black South Africans are much more varied and opportunistic, most likely caused by the impact of HIV/AIDS, labour migration, marital instability, desertion as well as cultural choice. In particular, HIV/AIDS related mortality has had devastating impacts among the middle-adult age group in poor black South African communities in recent years. Due to the increasing numbers of AIDS orphans, the elderly are increasingly forced to play parental roles. Considerably more black South African children are found to be living with their grandparents, siblings or other relatives, compared to other South Africans (AMOATENG / HEATON / KALULE-SABITI 2007: 51-52).

3.1.5 The position of women in society

To understand the position of female farm dwellers, it is necessary to highlight the general situation of women in South Africa which is determined by increasing constitutional equity and empowerment on the one side, and patriarchal structures and high levels of gender-based violence on the other side.

With the beginning of South Africa's democracy in 1994, constitutional and legislative changes as well as various parliamentary and constitutional commissions have favoured gender equity and strengthened women's legal rights. According to KISTNER (2003: 32), relevant laws and rights regarding gender inequality, gender-based violence and sexual coercion are found in the Constitution and the Bill of Rights (1996), the Choice of Termination of Pregnancy Act (1997), the Maintenance Act (1998), Domestic Violence Act (revised 1999), the Recognition of Customary Marriages Act (1998) and the Criminal Law Amendment Act (1997). Moreover, there are a number of relevant parliamentary and constitutional commissions, such as the Office for the Status of Women, the Parliamentary Women's Group, the Committee on the Improvements on the Quality of Life and Status of Women, the Commission for Gender Equality and Gender Desks in various government departments (KISTNER 2003: 32).

The country-specific Human Development Report for South Africa (UNDP 2009) takes two measurements to reveal the degree of gender-inequality in the country. The first measurement is the Gender-related Development Index (GDI) that uses the same indicators as the Human Development Index (HDI)[6], namely life expectancy, adult literacy, and purchasing power parity, but it captures inequalities in achievements between men and women. Results of the GDI are directly compared to the HDI, and the greater the gender disparity in the country, the lower is the GDI relative to its HDI. South Africa's GDI value of 0.680 only slightly differs from its HDI value of 0.683, showing low gender disparities within the above mentioned indicators. In the GDI rank, South Africa is 109th out of 155 countries. The single indicators used for GDI calculations are displayed in table 3.1.6, comparing South Africa's values with Norway which has the highest HDI rank and Ethiopia which has one of the lowest HID values.

The second gender equity measurement used by UNDP (2009) is the Gender Empowerment Measure (GEM) that reveals whether women take an active part in economic and political life. Selected indicators of GEM in South Africa are also displayed in table 3.1.6. South Africa's GEM value is 0.687, placing the country on rank 26 out of 109 countries.

[6] The Human Development Index is used as a measurement for a country's human development, looking at the complex relationships between income and well-being.

Table 3.1.6: Components and values of gender-related development index and gender empowerment measure in South Africa (UNDP 2009)

Gender-related development index (GDI) and selected components (2007)	South Africa	Norway	Ethiopia
HDI rank (out of 182 countries)	**129**	**1**	**171**
HDI value	0.683	0.971	0.414
GDI rank (out of 155 countries)	**109**	**2**	**144**
GDI value	0.680	0.961	0.403
Female life expectancy at birth (years)	53.2	82.7	56.2
Male life expectancy at birth (years)	49.8	78.2	53.3
Female adult literacy rate (% aged 15 and above), 1997-2007	87.2	99.0*	22.8
Male adult literacy rate (% aged 15 and above), 1997-2007	88.9	99.0*	50.0
Female estimated earned income (purchasing power parity US$)	7,328	46,576	624
Male estimated earned income (purchasing power parity US$)	12,273	60,394	936
Gender empowerment measure (GEM) and selected components			
GEM rank (out of 109 countries), 2007	**26**	**2**	**85**
GEM value, 2006	0.687	0.906	0.464
Seats in parliament held by women (%), 2008	34	36	21
Female professional and technical workers (%), 1999-2007	55	51	33
Women in ministerial positions (%), 2008	45	56	10
Year women received the right to vote and the right to stand for election	1930, 1994	1907, 1913	1955

* estimated values.

South African statistics, however, reveal gender inequality with regard to education and employment patterns, and these have not changed significantly during the last decade. In 2002, 12.0 percent of females aged 20 years and older had no formal education compared to 8.4 percent in the male population. Even though the percentage of those having received no education reduced significantly in both groups to 7.0 percent for males and 10.3 percent for females in 2008, gender-differences remained (STATS SA 2008b: 10-11).

A similar pattern comes to the fore when comparing unemployment and labour force participation rates between men and women in 2000 and 2009. Labour market indicators vary largely throughout the years; however, significant gender disparities remain unchanged. In 2002, 6.1 percent more women are unemployed (26.5%) compared to men (20.4%) while the men's labour force participation rate is higher (66.9%) than women's (53.0%) (STATS SA 2009e: 4). Similar statistics appear in 2009, with 26.0 percent of women and 22.9 percent of men being unemployed and a labour participation rate of 47.9 percent and 62.4 percent, respectively (STATS SA 2009b: 2).

It becomes obvious that gender inequality persists in South Africa. Nonetheless, the greatest concern regarding women's position in South African society is the high prevalence of violence and sexual coercion against women. Although policy and legal frameworks are in place, aiming to secure women's access to legal redress and gender equity, it is argued that they are often ineffective in their implementation at the community level (KISTNER 2003, OUTWATER / ABRAHAMS / CAMPELL 2005, VETTEN 2007, ICRW / HSRC / AfD 2008).

While there are several studies addressing gender-based violence in South Africa, statistics measuring the various forms of violence against women are sparse and outdated. Statistics most often cited in current publications are predominantly based on studies conducted by SA DoH (1999), JEWKES et al. (1999), DUNKLE et al. (2004a) and VETTEN (2007). All studies, however, highlight the difficulty to obtain reliable data of sexual violence due to under-reporting and thus true statistics are unknown and numbers are most likely underestimated. According to these studies, the current extent of gender-based violence in the country is summarised as follows:

- A large-scale community based study (n=1306) in three provinces in South Africa (Eastern Cape, Mpumalanga and Limpopo) in 1997 revealed that 19.1 to 28.4 percent of women have been physically abused in their lifetime by a current partner or ex-partner. The prevalence of rape has been 4.5 to 7.2 percent (JEWKES et a. 1999: 10-11).
- The South African Demographic and Health Survey (n=11,735) in 1998 revealed that 12.5 percent of women have been assaulted by a current or ex-partner and 7.0 percent had been either forced or persuaded to have sex at some time when they did not want to. Only 15.2 percent of women who have been raped reported it to the police (SA DoH 1999: 93-95).
- Women attending antenatal clinics in Soweto (Gauteng Province) in 2002/03 (n=1395) have reported the occurrence of physical/sexual partner violence (55.5%), adult sexual assault by non-partners (7.9%), child sexual assault (8.0%) and forced first intercourse (7.3%) (DUNKLE et al. 2004a: 230).
- Police statistics from 2004-05 report 55,000 cases of rape; however, considering underreporting to the police, the number of 'actual' rapes can be estimated between 111,000 and 490,000 (VETTEN 2007: 429).

As comes to the fore, levels of sexual and physical violence against women are very high with particularly high levels of domestic violence. Causes of violence against women in South Africa are multi-factual and include political, sociological, economic, traditional and cultural aspects (JEWKES et al. 1999, KISTNER 2003).

KISTNER (2003: 17-18) points out that within resistance to the apartheid regime, violence was approved as a primary strategy to resolve conflicts and bringing political change. With the legalisation of previously banned political organisations and the end of the apartheid struggle, a clearly defined enemy or aim went missing and aggressions

turned inward to internal structures. These 'displaced aggressions' predominantly affect physically, socially, economically and politically vulnerable persons, including women, children, the elderly and immigrants. In addition to these displaced aggressions, high unemployment and poverty are experienced by men as a personal rather than a social failure. The loss of power and control, which defines their masculinity, might be followed by violence as a means to re-assure their self-esteem (KISTNER 2003: 17-18).

JEWKES et al. (1999: 8-9, 20) reveal that the South African society is immensely patriarchal. In his study, conducted in three provinces in South Africa, he found out that many women themselves accept subservience to their husband (76.5 to 90.3%), punishment by him in some situations (35.3 to 50.8%), male ownership of women (58.4 to 71.9%), notions of male sexual entitlement (43.0 to 59.6%) and an interpretation for beating as a sign of love (15.2 to 33.7%). JEWKES et al. (1999: 8-9, 20) further argue that men can only continue to be abusive towards women if women, at some level, perceive this as their entitlement and as deserving this at times. Similar findings are revealed by KIM and MOTSEI (2002) when researching attitudes and experiences regarding gender-based violence among male and female nurses in rural South Africa, a group of educated and relatively privileged professionals. Male and female nurses in this study have internalised dominant cultural values and beliefs regarding gender and gender-based violence, and prevailing patriarchal and victim-blaming perspectives (KIM / MOTSEI 2002: 1246-1251).

Often discussed within the cultural context of violence against black women is the meaning attached to the *lobola* payment or bridewealth, a practice in which the groom's family offers a large payment to the bride's family. Traditionally, *lobola* has been paid in cattle but in modern times it is paid cash. It is widely believed by men and women that the *lobola* payment symbolises a 'transaction' of 'buying the wife', giving the man the control and ownership of a woman (JEWKES et al. 1999: 8-9, KIM / MOTSEI 2002: 1247, KISTNER 2003: 46).

According to KISTNER (2003), the constrained social and economic conditions under which the majority of black South African still have to live, largely contribute to the high prevalence of gender-based violence in South Africa. The majority of women, particularly in urban areas, remain in poverty and with limited access to education, health, transport and other services and limited access to justice in case of violence, leaving them literally as citizens without rights. Here, the domain of custom and kinship holds more security for women than constitutional reference to formal equity. At the same time, it imposes the power of patriarchy on them, entailing love, dependence, honour, obedience and the right to violence (KISTNER 2003: 17-18).

KISTNER (2003: 46) further argues that, as much as women have no or inadequate social security and face increasing economic marginalisation, their choices are severely constrained, rendering transactional sex as an opportunity to obtain financial or material benefits. Women may enter relationships to secure their means for their subsistence (e.g. food, shelter, clothes) and to obtain consumption items. There is an implicit understanding that when a man spends money on a woman, she is somehow

obliged to return his favour in having sex with him (KISTNER 2003: 46). In this regard, adolescent girls in particular may be abused by older men with whom they enter into transactional sex relationships, and by boys with whom they exchange sex for money for subsistence needs or material goods (KISTNER 2003: 7). In fact, 'sugar-daddy' relationships between adolescent girls and older men are common in South Africa and are often formed with the approval or encouragement of the girl's family (KISTNER 2003: 23, 46).

It is obvious that gender-based violence and transactional sex significantly contribute to South Africa's high prevalence of HIV/AIDS, making women especially vulnerable to it. The major factor linking gender-based violence and HIV/AIDS is the women's fear of a violent response from their partner which may prevent them from negotiating safe sex, seeking voluntary testing and counselling, seeking STI treatment, disclosing their HIV status and reporting rape and domestic violence. Moreover, forced sex may directly increase the risk of HIV infection through physical trauma, and the experience of sexual abuse in childhood may lead to increased sexual risk taking during adolescence and adulthood (KISTNER 2003: 6, 54; also see JEWKES et al. 1999:20, DUNKLE et al. 2004a: 230, DUNKLE et al. 2004b: 1415). Intimate partner violence does not only increase women's risk of HIV infections, its harmful extent furthermore includes increased health problems, such as injury, chronic pain, gastrointestinal and gynaecological signs including sexually-transmitted diseases, depression, and post-traumatic stress disorder and suicide (CAMPELL 2002: 1331).

One of women's responses to these patriarchal structures and abusive behaviour of men has been the increased formation of female-headed households. According to the Demographic and Health Survey (SA DOH 2003: 13), women head 42 percent of South African households. The proportion in non-urban areas is higher, with almost half of households being led by women, compared to 39 percent of households in urban areas. The higher proportion in non-urban areas may partly relate to the absence of males within the family due to labour migration. Nevertheless, the general trend towards women headed households also appears in urban areas (SA DOH 2003: 13).

Important in the contemporary discussion of female headed households, JONES (1999) argues in his study that women choose "singlehood for security". JONES discusses that male partners tend to bring extra costs to their families and they usually control expenditure and consumption, often resulting in economic neglect for women and children. Moreover, being dependent on their partner, women may constantly face the risk of abandonment and possible destitution. Hence, woman-led households have a better chance of domestic stability and economic security in the long-term, particularly if having access to networks of relatives and neighbours (JONES 1999, LEMKE et al. 2003).

3.2 South Africa's agriculture and the situation of farm dwellers

The current situation of South African farm dwellers is characterised by historical conditions of farm labour during apartheid on the one hand, and by recent economic and structural macro processes on the other hand. This chapter will provide a comprehensive overview on agriculture and the situation of farm dwellers in South Africa, drawing on characteristics of the agricultural sector and the historical background of farm labour, followed by a description of the current state of farm workers and the process of South African land reform with its implications for farm dwellers.

3.2.1 The role of agriculture in South Africa and in the North West Province

The South African Department of Labour (SA DOL 2001: 15) describes South African agriculture as a primary sector that has traditionally played an important role in the development of the country's economy. The sector contributes about 5.1 percent of formal employment opportunities (STATS SA 2009b: vii) and is therefore a major employer in rural areas.

According to BURGER (2009: 47), South Africa has a dual agricultural economy, with both well-developed commercial farming and more subsistence-based production in rural areas. About 13 percent of South Africa's surface area can be used for crop production. The most limiting factor of agricultural production in South Africa is the availability of water. The high variability of rainfall within and between the seasons renders South Africa's agriculture extremely vulnerable to the effects of drought (BURGER 2009: 47). As can be seen in Table 3.2.1, about 1.3 million hectares of land are under irrigation. In 2007, almost 40,000 commercial farming units generated a gross farming income (GFI) of almost ZAR 80 million. The number of full-time employees counts 432 thousand while the number of casual and seasonal employees is slightly lower with 365 thousand.

Table 3.2.1: Main characteristics of South African Agriculture

South African agricultural characteristics in 2007	
Utilised arable land (in ha)[1]	12 900 122
Number of commercial farming units[2]	39 982
Gross farming income (in ZAR'000)[2]	79 543 814
Number of employees[2]	
Full-time	431 664
Casual and seasonal	365 142

Source: [1] SA DoA 2009 based on Development Bank Southern Africa 1991.
[2] STATS SA 2009d.

Figure 3.2.1 indicates that approximately 55 percent of the total GFI is generated from animal production, followed by horticulture and field crops with 24 percent and 20 percent, respectively. The leading provinces of animal product sales are Western Cape (ZAR 7.2 billion or 16.5%) and Free State (ZAR 6.7 billion or 15.4%). Highest income generation from horticulture are generated by Western Cape and Limpopo with ZAR 7.7 billion (40.8%) and ZAR 2.9 billion (15.3%), respectively. Largest field crops earnings are generated by Free State (ZAR 4.2 billion or 26.4%) and KwaZulu-Natal (ZAR 2.9 billion or 17.9%) (STATS SA 2009d: 3).

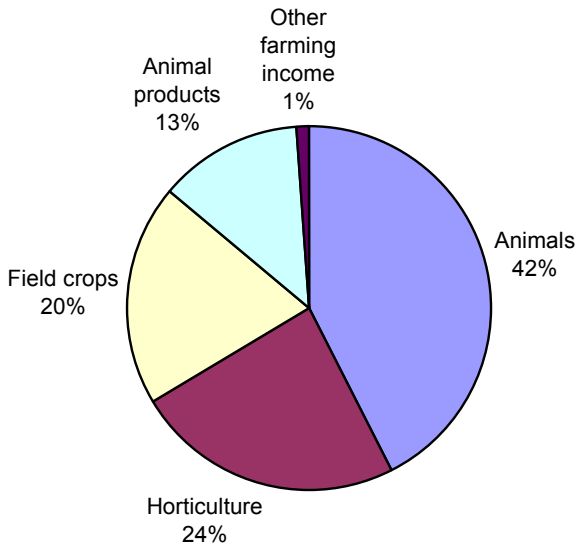


Figure 3.2.1: Percentage distribution of gross farming income by main division within agriculture in 2007 (Source: STATS SA 2009d: 3)

In 2006/07 the total gross value of agricultural production was ZAR 91 billion. Table 3.2.2 shows that field crops production and horticulture contribute ZAR 23.5 billion and ZAR 23 billion, respectively, while the largest share comes from animal products with ZAR 44.9 billion. It can further be seen that South Africa cultivates a large variety of crops. Maize, sugar cane and wheat are the most important field crops while deciduous fruits, vegetables and citrus fruits are the most common horticulture products. With regard to animal products, fowls, cattle and fresh milk compose the highest proportion.

According to Burger (2009: 50), maize is the largest locally produced field crop and most important source of carbohydrates in animal and human consumption. South Africa is the main maize producer in the Southern African Development Community.

Table 3.2.2: Gross value of agricultural production in 2006/07 (in ZAR'000)

Field crops		Horticulture		Animal products	
Maize	10 772 965	Deciduous and other fruit	6 101 516	Fowls slaughtered	13 965 725
Sugar cane	4 030 981	Vegetables	4 892 108	Cattle & calves slaughtered	12 514 286
Wheat	3 222 667	Citrus fruit	3 366 492	Fresh milk	6 027 899
Hay	2 174 874	Potatoes	2 941 100	Eggs	4 714 904
Sunflower seed	794 616	Viticulture	2 686 885	Sheep & goats slaughtered	2 381 827
Soya-beans	480 379	Subtropical fruit	1 634 191	Pigs slaughtered	2 066 507
Groundnuts	385 121	Flower and bulbs	756 866	Wool	1 131 931
Grain sorghum	300 246	Dried fruit	337 996	Ostrich feathers, products	343 964
Barely	372 036	Rooibos tea	141 467	Mohair	252 948
Other field crops	936 705	Other products	153 853	Other products	1 525 962
Total	**23 470 590**	**Total**	**23 012 474**	**Total**	**44 925 953**
		GRAND TOTAL	**91 409 017**		

Source: SA DoA 2009: 79

Burger (2009: 47) reports that South Africa has the ability to be self-sufficient as far as most major agricultural products are concerned. Moreover, South Africa is also a net exporter of agricultural products which contributed to on average about 7 percent of total South African exports for the past five years. The largest export groups are wine, citrus, sugar, grapes, fruit juice, wool and deciduous fruits. Other important exports include non-alcoholic beverages, avocados, pineapples, groundnuts, preserved fruit and nuts, hides and skins (BURGER 2009: 47).

Specific characteristics of agriculture in the North West Province

Agriculture in the North West Province is an important sector of the provincial economy, comprising 10.6 percent of the province's labour force, mainly male workers (STATS SA 2004: 59). Contributions of the agricultural sector to the provincial GDP have steadily decreased during the last decade, from 4.0 percent in 1996 to 2.6 percent in 2004. As illustrated in table 3.2.3, in the North West Province, about 2.3 million hectares of land are used for irrigation. This makes up 17.9 percent of the total land utilised by South Africa's agriculture. About 4,700 commercial farming units operate in the North West, earning a GFI of ZAR 8.7 million. The provincial agricultural labour force counts about 54,000 full-time employees and 32,000 casual and seasonal employed, making up 12.4 percent and 8.8 percent of South Africa's total agricultural labour force.

Table 3.2.3: Agricultural characteristics of the North West Province in 2007

North West's agricultural characteristics in 2007	North West Province	Percentage of South African total
Utilised arable land (in ha)[1]	2 314 833	17.9
Number of Commercial farming units[2]	4 692	11.7
Gross farming income (in ZAR'000)[2]	8 755 883	11.0
Number of employees[2]		
Full-time	53 741	12.4
Casual and seasonal	32 008	8.8

Source: [1] SA DoA 2009 based on Development Bank Southern Africa 1991.
[2] STATS SA 2009d.

Figure 3.2.2 indicates that animals and animal products contribute the largest proportion to the province's gross farming income with 64 percent. Field crops and horticulture contribute 26 percent and 9 percent to the gross farming income, respectively.

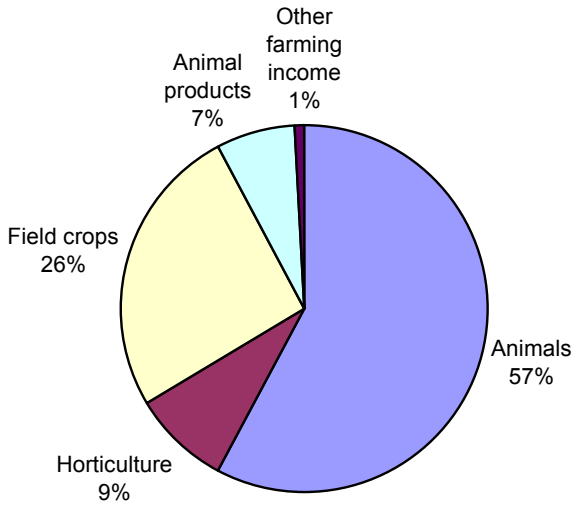


Figure 3.2.2: Percentage distribution of gross farming income by main division within agriculture in the North West Province in 2007 (Source: STATS SA 2009d: 12)

Cattle (beef and dairy), pigs and sheep are the most common animal products in the North West Province. Largely produced field crops are maize, sunflower seed, groundnuts and wheat. The most produced horticulture products mainly comprise vegetables, such as potatoes, onions, carrots and cabbage (STATS SA 2006: 27-50).

3.2.2 Historical background of farm labour in South Africa

In 1990, DAVIES (1990: vii) described the exploitive situation of farm workers in South Africa who had almost no legal protection and were entirely dependent on their employer's mercy. Farm workers' lives were determined by poor wages, long working hours, inadequate accommodation and exposure to dangerous occupational hazards. Moreover, their problems were compounded by having low educational levels and very little outside assistance (DAVIES 1990: vii). These dire conditions of rural people in South Africa have roots far back into the past. It started with the dispossession of land of black pastoralist and farming communities by white settlers from the mid-seventeenth century onwards. White settlers occupied most of the land after several frontier wars with black chieftainships and kingdoms, after drawing up false treaties and deeds of sale and in the end, using armed force (DAVIES 1990: 1). Gaining increasing ownership over land, British and Dutch settlers needed labour for their farms, plantations and mines, but the black population was not very attracted to work for the settlers, slaves were imported from 1658 to fill the labour shortage (KEEGAN 1986, DAVIES 1990: 1). With the abolition of slavery by the British in 1834, the problem of labour shortage arose again (DAVIES 1990: 1). By means of master and servant laws, pass laws and other measures, Africans and Coloureds were deliberately deprived of their livelihoods and economic independence and forced to work as cheap labour in the agricultural sector (TERREBLANCHE 2002: 11-14).

The Native Land Act of 1913 which divided the country into white and black areas allocated a mere seven percent (later up to 13 percent) of the land to the black population (THOMPSON 2000: 163). The Act also made cash-and-kind tenancy contracts illegal, and instead, a growing number of landlords introduced labour tenancy on threat of eviction (JEEVES / CRUSH 1997: 21). The Act was only of advantage to white agriculture and "removed a source of competition in the peasantry but also left those same peasants, as they became increasingly impoverished, with only their labour to sell" (JEEVES / CRUSH 1997: 2).

After the National Party came into power in 1948, stricter pass laws, influx control measures and an efficient labour bureau system were introduced, capturing black labour in the white agricultural sector (DAVIES 1990: 4-5, TERREBLANCHE 2002: 11-14). During the next decades, South Africa's agriculture experienced a transformation into commercial agriculture. There were three major means which led to the reconstruction of agriculture: 1) mechanisation and other technological innovations, 2) the concentration of larger tracts of land in the hands of fewer people, and 3) a high degree of state support and subsidy for these processes (DAVIES 1990: 6). Between 1911 to 1936, the state has been a very important factor in the restructuring process, ensuring cash assistance, subsidies, tariff protection, research, administration, and information to white farmers (THOMPSON 2000: 166). At the same time, various strategies were undertaken to destroy labour tenancy and to replace it with straight wage labour. In the

1960s and 1970s, millions of farm workers were expelled from their homes on white farms due to forced removals to the Bantustans (DAVIES 1990: 6-7).

JEEVES and CRUSH describe the situation of farm workers between 1910 and 1950 as a pervasiveness of racial violence and brutality, with workers being an "object of intense surveillance and relentless discipline" (JEEVES / CRUSH 1997: 25). According to DAVIES (1990: 6), farmers had excessive control and power over their workers and the extent of exploitation was almost unlimited. Working conditions varied from farm to farm but they were generally very poor. Whether or not workers were fairly treated or cruelly exploited depended on the individual farmer. Only in a few cases, the help of unions or other support organisation had brought some improvements in wages and working conditions to farm workers (DAVIES 1990: 11).

Since 1994, with the new democratic constitution, new policy agreements have attempted to improve the situation of farm dwellers, including new laws on fair labour practices and minimum wages (ATKINSON 2007: 72) as well as land reform and land tenure security (WEGERIF / RUSSELL / GRUNDLING 2005: 7, ATKINSON 2007: 79). The current state of farm dwellers and implications of land reform will be discussed in the two following chapters.

3.2.3 Current state of farm workers in South Africa

According to SA DoL (2003a, b), the majority of farm workers are South African citizens and less than three percent are foreign nationals mainly from other Southern African countries. Farm workers are relatively young, with the majority being of an age between 20 and 35 years. About 70 percent of all workers are male, reflecting a strong male bias.

The number of farm workers has declined dramatically over the last decade, with an overall reduction of 25% from 1988 to 1996. There has not only been a decline in permanent employment, casual/seasonal employment also experienced a marked decline. Gender seems to be the most important differentiation between temporary and permanent workers. Employers often view male workers as 'permanent' while females are viewed as 'casual' workers whose employment is contracted via a male partner (SA DOL 2003a, b). Thus, fluctuations in the use of seasonal or casual labour are likely to have much greater impact on women than on men. Equally, the decline in permanent male workers affects women as well because they lose their home through the retrenchment of their spouse (HUSY / SAMSON 2001: 6).

The SA DoL (2003a: vii) indicates three main characteristics by which employment in agriculture differs from employment in other sectors:

- dependence of workers on employers (for continued access to goods, services and especially accommodation, as well as for employment);
- isolation of workers from sources of information and social support beyond the farm; and
- significant obstacles to enabling workers to access their labour rights – even when they are informed about them.

These characteristics have an enormous influence on farm workers' lives as well as their health and working conditions, which will be described in the following sections.

Living conditions of farm workers

Poverty has been a condition for farm workers as long as there have been commercialised farms in South Africa. First slavery and then paternalistic structures locked black workers into dependence on a labour system in which they were usually harshly exploited and often brutalised (DU TOIT 2005: 38). As described by WALDMAN and NTSEDI (1997: 103-104), paternalism is determined by the farmer's control over and manipulation of farm workers and by farm workers' inability to resist this control or challenge their current situation. WALDMAN and NTSEDI (1997: 103-104) further point out that farmers do not only assert their dominance but they also hold a position of paternal authority and moral guidance. Another key aspect of paternalism is illustrated by workers' dependence on the farmer through tied housing (DU TOIT 2005: 14).

According to DU TOIT (2005: 3), social relations, within and among households, play an important role in shaping the survival strategies of household members. Besides formal associations, such as church and other religious organisations, kin relationships play a crucial role in the immediate survival strategies. Help could take the form of lending money, providing basic food, or even allowing hungry relatives to share a meal. (DU TOIT 2005: 31).

Most farm dwellers live on-farm in houses that do not belong to them and that they did not build. The right to reside in a dwelling on a farm is usually linked to the labour contract between the farm owner and the worker. While permanent farm workers are mostly men, women usually have the right to live and work on the farms only through their attachment to male labourers. When a worker is laid off or employment is terminated in some other way, the right to reside in the dwelling is also terminated (SAHRC 2003: 43).

The farm survey of SA DoL (2003a, b) found that the average household size of farm workers is relatively small, with more than 60 percent of farm workers living in households containing four or fewer members. This is mainly due to the farm owners' restrictions of the number of dependants allowed to live in the dwelling. The quality of

on-farm housing and available services varies immensely between and even within the provinces. The majority of all farm workers (65%) live in a formal dwelling with an average of three rooms per house. On some farms, there are also hostels provided for farm dwellers, where ten or more employees cohabit and family members are not allowed to reside. With regard to sanitation, only about a third (35%) of farm workers have tap water available in their homes. Generally the water provided on farms is considered to be safe. Two types of toilets are prevalent: pit latrines and flush toilets. More than half (54%) of the workers living on-farm use pit latrines and less than a third (29%) have access to a flush toilet. The others (18%) do not have any access to toilets, using instead buckets or go behind the bushes. About two thirds (66%) of farm workers have electricity in their homes, mainly used for lights (65%), cooking (48%), TV and radio (43%) and household equipment such as refrigerators (28%).

According to SA DoL (2003b: 32), the provinces in which the quality of housing appears to be of a generally higher standard are the Western Cape and Mpumalanga. The North West Province is one of the provinces in which the worst housing conditions are apparent.

Current land reform processes in South Africa considerably impact on livelihoods of South African farm dwellers. Two larger research projects, namely “Livelihoods after land reform”[7] and “Farm workers and farm dwellers in South Africa: tenure, livelihoods and social justice”[8], focus on this topic, soon providing up to date information.

Education and literacy of farm workers

According to SA DoL (2003a, b), farm dwellers have the lowest rate of literacy in the country (when literacy is defined as the percentage of the population over the age of 13 who have completed the first five years of education). Moreover, a significant proportion of farm workers (33%) have no formal education. The average level of education is generally higher among younger South Africans (<40 years). However, this age differential is lower with farm workers than for any other employment group.

Health and nutrition of farm workers

According to the South African Human Rights Commission (SAHRC 2003: 122), farm workers experience a lack of access to health services. Barriers faced by workers to attend health care services are long distances to the nearest primary health care service, financial constrains, a lack of transport and access to health care services after

[7] Institute for Poverty, Land and Agrarian Studies (PLAAS), School of Government, University of the Western Cape, Cape Town (http://www.lalr.org.za/; accessed May 2010).

[8] SHIRINDA S and HALL R (http://www.plaas.org.za/research/land/farmworkers; accessed May 2010).

hours or during weekends, telecommunication not being readily available and little or no health education. Therefore, farm workers tend to be highly dependent on their employers when they or their family are ill (SAHRC 2003: 122).

LONDON (2003: 60) describes that farm workers experience high burdens of communicable and non-communicable diseases. For example, tuberculosis incidence rates in rural Western Cape are two to three times higher than in urban rates. Exposure to occupational health hazards such as pesticides, organic dust and ergonomic and mechanical hazards have been well documented. Furthermore, rates of injuries among South African farm workers are higher than those in most other occupational sectors. Moreover, the adverse living conditions and lack of available health care result in low birth weight, exceptionally high rates of tuberculosis and high infant mortality rates (HUSY / SAMSON 2001: 15).

According to LONDON (2003: 61), one of the unique features of South African agriculture, particularly in the Western Cape, is the 'DOP'[9] system, historically introduced by colonial settlers who paid their workers with alcohol rations. This practice has served to trap farm workers over generations into a cycle of poverty in which alcohol dependence, inter-personal violence and poor self-esteem are intimately connected. Although no longer legally practiced, the associated legacy of widespread alcohol abuse among farm workers is enormous (LONDON 2003: 61). Also KRUGER et al. (2006) have pointed out that alcohol is regularly consumed on farms in the North West Province. In their study, 83 percent of men and 64 percent of women indicate that they consume alcohol regularly, seemingly to 'compensate' for very limiting and destitute living conditions (KRUGER et al. 2006: 3-4).

With regard to nutrition, the NFCS 1999 (LABADARIOS 2000) revealed that children living on commercial farms are more likely to be stunted and underweight than other children in South Africa. One out of three children (33.3%) on commercial farms are stunted, about one out of five (18.1%) are underweight and approximately one out of 25 (4.2%) display the symptoms of wasting. Furthermore, only about one in four (23.0%) children on commercial farms is food secure, about a third (29.0%) are at risk of hunger and almost half of the children living on commercial farms experience hunger. Although findings of the NFCS are specifically related to the children of farm workers, it can be assumed that the general nutritional status of farm worker households is insufficient.

Similar findings on children's nutritional status on commercial farms in the North West Province have been revealed by KRUGER et al. (2006: 3-4) with 24.5 and 19.1 percent of children under the age of ten being stunted and underweight, respectively. The rate of wasting among children counted for 6.7 percent and none of the children were found to be obese. With regard to the nutritional status among adults, findings show that 68.4

[9] The word 'dop' in colloquial Afrikaans means alcohol.

percent of men and 39.6 percent of women have a BMI below 21 kgm^{-2} while 11.6 percent of men and 26.9 percent of women had a BIM higher than 25 kgm^{-2} (KRUGER et al. 2006: 3-4).

Wage and working conditions

Labour conditions on farms are among the poorest of all employment sectors in South Africa and only a few farm workers seem to enjoy full labour rights, with women enjoying even fewer rights than men (SA DoL 2003a, b). Although legal protection has been extended to farm worker's labour rights, the SAHRC (2003) found that generally there is a widespread non-compliance with labour legislation. Extremely low wages, long working hours, dangerous working conditions, victimisation of trade-union members, child labour practices, the use of the 'DOP' system and the use of illegal immigrants were amongst the violations found by the commission. It is also clear that the protection afforded to farm workers by the Department of Labour is inadequate. Thus, working conditions tend to be not regulated by law, but by the interest of the land owner (SAHRC 2003).

Farm workers earn the lowest wages among those formally employed in the country. However, there is a considerable variation at provincial level. According to SA DoL (2003a ii-iii), the average cash wage in agriculture in 1996 was ZAR 544 (at prices 2000) and female farm workers are paid less than men. Moreover, SA DoL (2003b: 37) states that aside from the cash wage, workers may received other remuneration, such as free housing, contributions to the Worker's Compensation Fund and Unemployment Insurance Fund, pension and medical funds as well as in-kind payments. Under payments-in-kind, the following items are specified: rations of food, tobacco, clothing, shoes, transport, training, medicine provided to farm workers and medical expenses paid on their behalf (SA DoL 2003b: 37).

A minimum wage for farm workers was implemented on 1 March 2003 (SA DoL 2003c). Rates differ between rural and urban areas and have been increased yearly since their introduction. Minimum wages amounted to ZAR 885 in 2006/07 and increased to ZAR 989 in 2007/08 and ZAR 1090 in 2008/09 (SA DOL 2006). While the introduction of minimum wages might have improved the economic situation of farm workers, in practice, this sometimes means that farm owners shorten previous benefits such as housing subsidies and food rations (LEMKE 2005: 846, KRUGER et al. 2006: 6, ATKINSON 2007: 122-124).

3.2.4 South Africa's land reform and its implications for farm dwellers

Since 1994, the South African government has put land reform policies into place to return land to those who were unfairly dispossessed in the past, to redress extreme racial imbalances in landholding and to alleviate poverty in rural areas (LAHIFF 2007: 15). Up to today, policies continue to be guided by the White Paper of South African Land Reform Policy published by the Department of Land Affairs in 1997, with its emphasis on a market-based approach known as a 'willing buyer, willing seller' model. This model is based on recommendations by the World Bank and is characterised by the voluntary nature of the process, payment of full market-related prices, a reduced role for the state and the removal of various 'distortions' within the land market (LAHIFF 2008: 33). Land reform policies include three main programmes: Land restitution, land redistribution and tenure reform.

The **land restitution** programme aims to return land to previously dispossessed owners during the post-1913 period (e.g. land dispossessions due to the Natives Land Act). According to the Development Indicators (THE PRESIDENCY 2009: 34), 95 per cent of almost 80,000 land claims have been settled since 1994, benefiting more than 1.5 million people. The Government's land restitution objective is to settle all outstanding claims by March 2011. LAHIFF (2008) describes a recent change in the land restitution process from predominantly cash compensations and restoration of state-owned land in early phases of the process to claims affecting privately owned land. The latter, mainly affecting high-value agricultural land, forestry land and well-developed tourism enterprises, face resistance from current owners and contribute to a slow pace of settlement. Due to the complexity of these claims and pressuring deadlines for the settlement of all restitution claims, prospects of expropriation gain increasing attention. However, by the end of 2007, only one expropriation has taken place in the Northern Cape. Recently, the concept of 'strategic partnerships' has become increasingly evident in large restitution settlements. Under this model, a joint venture is formed between the claimant communities, organised in a communal property association (CPA) or trust, and a private entrepreneur, the so-called 'strategic partner'. The entrepreneur invests working capital and takes control of all farm management decisions for a defined period of time with the option of renewal. Potential benefits for the claimant community encompass rent for use of the land, a share of operating profits, preferential employment opportunities, training and the promise that they will receive functioning and profitable enterprises at the end of the contract (LAHIFF 2008: 19).

The **land redistribution** programme supports rural people to acquire land when they are not in the position to benefit from the land restitution (MOSELEY 2006: 1). According to LAHIFF (2008: 21), redistribution is potentially the most important and far-reaching component of the land reform. Taking into account that close to 90 per cent of agricultural land was controlled by the white minority at the end of apartheid, redistribution processes have potential implications for most of the national territory and

much of the population. Redistribution is largely based on discretionary grants provided by the Department of Land Affairs to purchase land on the open market. However, the introduction of the Proactive Land Acquisition Strategy in 2006 has led to increasing land purchases directly by the state, albeit still on the basis of voluntary transactions and at agreed prices (LAHIFF 2008: 3). The Development Indicators Report (THE PRESIDENCY 2009: 35) states that the Government has delivered approximately 2.9 million hectares of white owned agricultural land to beneficiaries since 1994; however, the goal to distribute 30 per cent of the country's agricultural land by 2014 remains a big challenge. The newly established Ministry of Rural Development and Land Reform (former Department of Land Affairs) seeks to bring new impetus to the process (THE PRESIDENCY 2009: 35).

The third programme of South Africa's land reform policy refers to **tenure reform**, encompassing tenure security (Labour Tenants Act 3 of 1996) and communal land rights (Communal Land Rights Act 11 of 2004). As discussed by LAHIFF (2008: 4), little is known about the progress with the settlement of approximately 20,000 labour tenants' claims. Particularly with regard to farm dwellers, it appears that farm tenure becomes a redistributive matter, with farm dwellers' needs for tenure security being included in the redistribution programme. Thus, it seems that many labour tenants may have been resettled on land acquired as a part of the redistribution programme, but others have been evicted while their claims await official attention (LAHIFF 2008: 4). Given that close to one million people were evicted from farms since the beginning of democracy in 1994 (WEGERIF / RUSSELL / GRUNDLING 2005: 185), the effictiveness of tenure reform seems inadequate up to today.

By March 2007, the land reform programme in all its forms has managed to transfer approximately 4 million hectares (roughly 5%) of white-owned land to historically disadvantaged people (LAHIFF 2008: 1). LAHIFF (2008) points out that the programme is widely criticised not only for the slow pace of land redistribution but also for its failure to impact significantly on the land tenure systems prevailing on commercial farms and communal areas as well as the limited improvements in agricultural productivity and livelihood benefits for the majority of participants. The reasons most widely attributed to this failure are inadequate planning, a general lack of capital and skills among intended beneficiaries, a lack of post-settlement supports from state agencies, and poor dynamics within beneficiary groups. In particular, many beneficiaries experience severe problems in accessing services like credit, training, extension advice, transport and ploughing service, veterinary service and access to input and produce markets. Moreover, failure in restructuring the agricultural economy is evident in the widespread under-utilisation of the transferred land, the continuing abuse and eviction of farm dwellers, non-functioning communal property institutions and missing evidence on job creation and poverty alleviation (LAHIFF 2008).

4 RESEARCH AIMS AND CONCEPTUAL FRAMEWORK

In this chapter the overall objective and conceptual framework of this study will be described, followed by a compilation of the specific research questions.

4.1 Overall research objective and conceptual framework

The overall objective of this study is to explore the role of social networks with regard to food and livelihood security among people living on farms in the North West Province of South Africa. It is investigated in which ways individual social networks either enhance, maintain or limit household food and livelihood security with emphasis on gender relations and intra-household dynamics. The aim is to give detailed insights into the situation of food and livelihood security of South African farm dweller households and to reveal responses and coping strategies to food and livelihood insecurity. Furthermore, it is aimed at contributing to a better understanding of the complex concept of social capital and social networks.

For this research, a conceptual framework was established (see figure 4.1.1) from which the research objectives derive. The framework consists of the following five main components: (1) The farm environment (three-circle-figure including micro, meso and macro environments) and its influences on network formation; (2) the individual social network and its direct interdependent connection with (3) household livelihood security and (4) household food security; and (5) livelihood shocks threatening household food and livelihood security as well as their impact on social network formation and usage.

The three-circle-figure is drawn from LEMKE's (2005) framework on underlying causes of nutrition insecurity from the perspective of South African farm worker households showing the three causality levels of nutrition insecurity (detailed description in chapter 5.1.1). For the purpose of this research, Lemke's framework has been simplified and adapted in order to broaden its meaning to indicators impacting on social network formation in the context of food and livelihood security. Livelihood shocks that could influence farm dwellers' food and livelihood security as well as their social networks are derived from the DFID (1999) sustainable livelihood framework (see chapter 2.2.2).

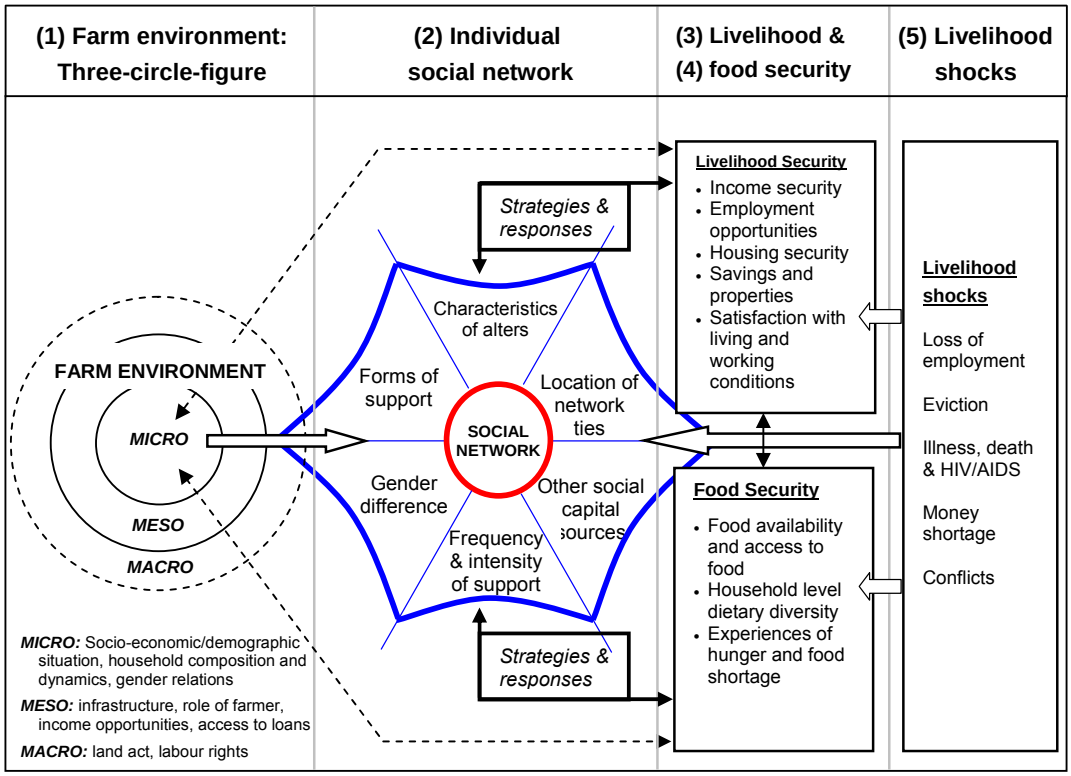


Figure 4.1.1: Conceptual framework of the study

In the centre of the framework, the **individual social network** is placed, showing the main determinants of farm dwellers' social network patterns. Here, the location of network ties, characteristics of alters, support forms, frequency and intensity of support as well as the additional social capital resources and gender differences in network formation play a crucial role in describing the influence of social networks on household food and livelihood security.

The **three-circle-figure** (LEMKE 2005) on the left illustrates the micro-, meso-, and macro level of the **farm environment** which influences the individual-social-network-formation. The inner circle, the *micro-environment*, represents the individual and household level. Hereby, household composition, intra-household dynamics, gender relations, socio-economic situation as well as socio-demographic characteristics of household members will be explored as indicators influencing social network formation. At the *meso-environment,* which represents the community level, factors such as infrastructure, the role of the farm owner, generating opportunities, access to credits and loans and their impact on social network formation will be investigated. The *macro-environment* represents the national level, including among others the pressing issues of labour rights and land reform. Even though the impact of the macro-environment is crucial for farm workers' lives and future, it will not be the focus of this research (dashed circle) because the macro-environmental factors were investigated by the

principal researcher of the larger research project. Nevertheless, these findings will be included to explore the social network formation and usage to respond to these macro-environmental changes. Simultaneously, the three circle figure still shows the causes important for food and livelihood insecurity, as suggested by LEMKE (indicated by dashed lined arrows to the nutrition- and livelihood-security-boxes), which will contribute to the understanding of social networks in the context of household food and livelihood security.

Indicators of household food and livelihood security are shown in two separate boxes to the right of the individual social network. **Livelihood security** is determined by income security, employment opportunities, housing security, savings and property ownership and satisfaction with living and working conditions. Indicators for **food security** explored here are food availability and access to food, household level dietary diversity and experiences of food shortage and hunger. Food and livelihood security are interrelated and also interdependent with social network usage and formation. It is assumed that when the state of food and livelihood security changes, network formation and usage will change as well. On the other hand, changes in the individual social network might cause a change in the state of nutrition and livelihood security. Furthermore, it will be investigated in which ways social networks are used to respond to or overcome food and livelihood insecurity. **Livelihood shocks** that will be considered in this research are loss of employment, eviction, illness, death, HIV/AIDS, money shortage, and conflicts. Livelihood shocks can have a direct impact on livelihoods and food security as well as on social networks.

4.2 Specific research questions and indicators

The present study explores food and livelihood security among farm dwellers and the meaning of individual social support networks to secure livelihoods and adequate nutrition. Based on the conceptual framework (see figure 4.1.1, p. 60), the following central research questions are investigated:

1. What is the situation of household food and livelihood security among farm dwellers?
    a. What is the state of household food security concerning food availability, access to food, dietary diversity as well as experiences of food shortage and hunger?
    b. How do farm dwellers form their livelihoods? Which employment opportunities and conditions exist and what is the financial situation of the household?
    c. How satisfied are farm dwellers with their living and working conditions and what are their future perspectives?
2. How do household level characteristics and intra-household relations influence food and livelihood security?
3. How do social networks emerge within and outside the farm community and what type of network pattern will come to the fore?
    a. How do the socio-economic characteristics of farm dwellers (e.g. sex, age, qualification, duration of stay on farm, place of birth) influence their network formation?
    b. What are the characteristics (e.g. relationship, place of residence, sex, age) of actors within the network?
    c. What is the role and importance of different support forms (emotional, caring, material, lodging and financial support)?
    d. How does the location of network ties within the farm community, within the closer farm area, or to a distant rural or urban area determine the frequency, intensity and forms of the network usage?
4. How do social networks influence household food and livelihood security?
    a. Which characteristics of social networks hinder or help to achieve or maintain food security? Which strategies are used and which responses occur to overcome food shortages and hunger?
    b. Which characteristics of social networks enhance or restrict livelihood security? Which livelihood shocks do farm dwellers face and what is the role of social networks in responding to these shocks?

   c. What is the specific role of farm owners and the family of farm owners to achieve food and livelihood security?

5. What are the specific gender roles within social networks? What gender differences exist in network formation and in support-giving and -receiving with regard to the frequency and different forms of support?
6. Which other social capital resources can farm dwellers draw on? In which ways do these resources benefit farm dwellers?

A detailed overview of the specific research objectives and indicators is provided in the following table:

Table 4.2.1: Specific research objectives, categories and indicators

Research objective	Categories	Indicators
Socio-demographic situation	Baseline information about informant	- Age - Sex - Place of birth - Educational status - Duration of stay on the farm - Marital status, duration of relationship
Micro-environment (household) characteristics	Household composition	- Number of present household members and relationship with informant - Number of distant household members and relationship with informant - Education and current occupation of all household members - Child fosterage - Changes and movements over time and their reasons
	Intra-household dynamics and decision-making/gender relations	- Decision-making regarding money spending, family planning, future plans - Role and decision-making power of women within the household - Co-operation/conflict between household members - Perceptions of gender roles in the household - Allocation of resources, assets and goods in the household
	Socio-economic situation	- Income sources from formal and informal wage employment - Remittances from migrant or distant household members - Social assistance and pensions - Assets, investment, saving and property somewhere else
Meso-environment (community) characteristics	Infrastructure	- Access and availability of transport to town - Access to education and information - Access and availability of health and social services
	Other characteristics	- Role of farm owner - Generating opportunities - Access to credits and loans
Food and livelihood security	Food security	- Food availability and access to food - Household level dietary diversity - Experiences of hunger and food shortage
	Livelihood security	- Income security - Employment opportunities - Housing security - Savings and properties - Satisfaction with living and working conditions - Future perspectives

Research objective	Categories	Indicators
Livelihood shocks		- Loss of employment - Illness/disease (HIV/AIDS), death of family member - Money shortage - Personal problems - Food shortage and hunger (food insecurity)
Social network characteristics	Characteristics of alters	- Sex - Age - Place of residence - Relationship to ego - Occupation
	Location of network ties	- Relationships within the farm community - Relationships outside the farm community: urban or rural area
	Forms of support	- Material - Financial - Emotional - Assisting - Lodging
	Frequency and intensity of support	- Frequency between support giving and/or receiving - Amount of goods gave and/or received - Mutuality
	Other social capital sources	- Church groups - Stokfel or burial societies - Needle work project - Land claim community
	Gender differences	- Differences in network formation between man and woman - Differences between number of alters in network - Differences in support forms between men and women - Differences in frequency and intensity of support
Social networks as **strategy and response** to livelihood shocks	Food insecurity	- Characteristics of alters supporting during food shortage - Factors hinder and help to maintain or achieve food security - Gender differences in network usage - Importance of specific persons to achieve food security (e.g. farmer, shop owner)
	Livelihood insecurity	- Characteristics of alters supporting during disease, money shortage, personal problems or lost of employment - Factors hinder and help to maintain or achieve livelihood security - Importance of specific support forms - Gender differences in network usage

5 METHODOLOGY

This chapter provides a detailed description of the methodology used within this study. It begins with setting the role of this study within the larger research project and an illustration of the mixed methods design, in which a quantitative part is integrated into a qualitative frame. This is followed by a description of the process of gaining access to the farm communities and building relationships with farm dwellers. Thereafter, methods of data collection and analysis will be specified and the role of the researcher as well as ethical considerations will be depicted. The chapter ends with a description of the trustworthiness (validity) and limitations of this study.

5.1 Role of study in the larger research project

The present study is part of a multidisciplinary research project entitled “Nutrition security, livelihoods and HIV/AIDS of black South African farm worker households – Qualitative social research from the household and gender perspective” (LEMKE 2005). Several researchers from Europe and Southern Africa were cooperating in this project, integrating the disciplines of Nutrition Science, Consumer Science, Social Anthropology, Social Work, Economics and Nursing Science. From 2004 to 2007, the project was funded by the German Research Foundation (Deutsche Forschungsgemeinschaft), the Belgian non-governmental organisation Nutrition Third World and the South African National Research Foundation. The research project was situated at the Centre for International Development and Environmental Research of the Justus-Liebig University Giessen in Germany and was conducted in close cooperation with the Nutrition Research Group of the North-West University, Potchefstroom Campus in South Africa.

Research in this farm area and on the topic of household food security started in 1997. To explore and assess household food security, a qualitative research design was developed, which was an innovative approach at that time (Lemke 2001; Lemke et al. 2003, Margetts 2003). This initial study on household food security formed part of the larger cross-sectional THUSA survey that investigated the impact of urbanisation on the health of black South Africans in the North West Province (Vorster et al. 2000). As a follow-up of the THUSA survey, the Farm Labour and General Health Programme (FLAGH) started in 2001, a multidisciplinary research and intervention programme consisting of several projects and studies aimed at improving farm dwellers’ nutritional status and quality of life (KRUGER et al. 2006: 831). Linked to the infrastructure of the FLAGH programme, the planning and preparation of the larger research project started in 2003 with preliminary farm visits and interviews with key informants. After initial interviews with farm owners to obtain permission to carry out research, the research projected started in August 2004 with four selected farms taking part in the study.

5.1.1 Objectives and conceptual framework of the larger research project

The larger research project investigated underlying causes of nutrition insecurity and the link with livelihoods and HIV/AIDS, at the micro-level of South African farm worker households on four commercial farms in the North West Province, taking into account the meso- and macro-level context (LEMKE 2005, LEMKE / BELLOWS / HEUMANN 2009). A qualitative social sciences research approach was applied with a strong focus on gender-dynamics and intra-household relations as well as on the relationship between farm owners and farm workers. Due to the current transition in the South African farming sector, further emphasis has been laid on land reform and the consequences for farm owners and farm workers. The findings of the larger research project contribute to a better understanding of the situation of South African farm workers, recognising the interdependence between nutrition security, livelihoods and HIV/AIDS and their underlying social factors. These are issues which need to be taken into account for the better targeting of development programmes not only for South African farm workers but also for other population groups living in similar constrained conditions (LEMKE 2005: 849).

For the purpose of the larger research project, a new conceptual framework on the causes of nutrition insecurity among farm worker households in South Africa has been developed by LEMKE (2005). The framework, as illustrated in figure 5.1.1, draws on elements of the UNICEF (1990) framework (see chapter 2.1.3) and the household system-logic based on the conceptualisation of VON SCHWEITZER (1991). In the centre of her framework, LEMKE places the household triangle, which represents the basis for all actions at the household level. The triangle consists of activities, livelihood assets or resources and capabilities. Household dynamics are situated in the centre of the triangle, enfolding differences of power and control between different household members. The concept of household is adapted to the specific South African situation, with households characterised by fluid boundaries and often stretched over several domestic units, resulting in multiple household memberships. In the framework the core household is represented as H1 and extended households that are connected to H1 through kinship or other social relationships are represented as H2 and H3 and possibly H4, H5, etc. The determinants for nutrition insecurity are placed on different causality levels, represented by the surrounding circles. *Basic causes* of nutrition insecurity relate to the macro-environment (national level), including human and environmental resources, political and economic structure of the country, stability of food markets, availability of public services, education and information and formal and informal institutions. *Underlying causes* of nutrition insecurity relate to the meso-environment, the farm community, comprising the availability of food, education and information, farm and off-farm employment, adequate infrastructure and HIV/AIDS. *Immediate causes* relate to the micro-environment entailing the household triangle, referring to the household and individual level. Moreover, the concept embraces two temporal aspects symbolized by two arrows crossing the circles. The first arrow

represents the process of social transformation at the national level. The second arrow describes different stages during the life cycle at the individual and household level (Lemke 2005: 848-849).

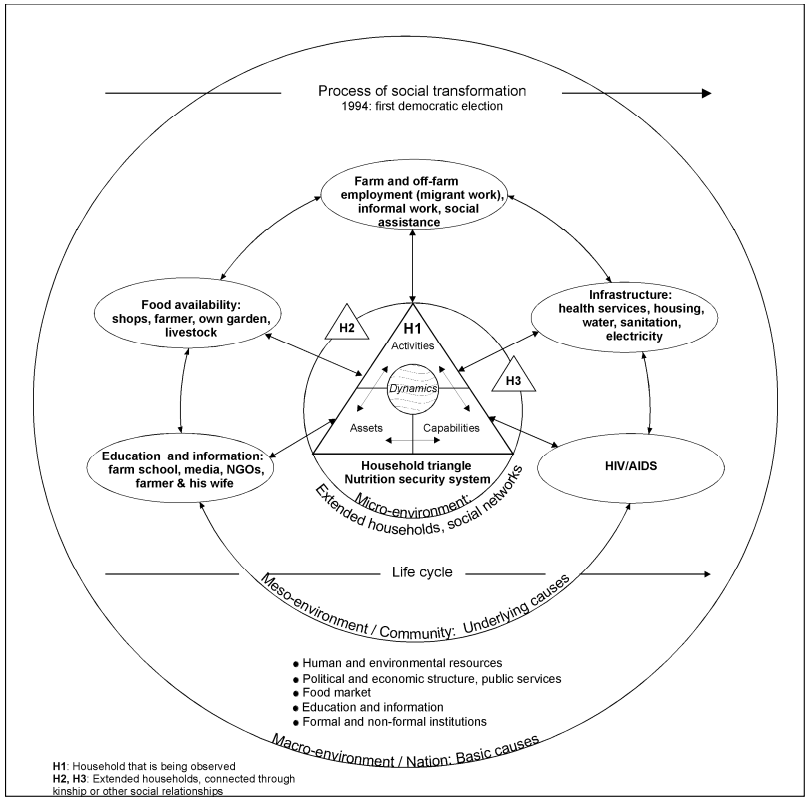


Figure 5.1.1: Nutrition security and underlying causes from the perspective of black South African farm worker households (Source: Lemke 2005:849)

5.1.2 Setting of this study within the larger research project

Starting in 2004, the researcher undertook two interrelated sequent sub-studies within the larger research project. As can be seen in figure 5.1.2, the larger research project, entailing several sub-studies was carried out from 2004 to 2008. The author's first sub-study took place from 2004 to 2005. It was a qualitative empirical study exploring the food and nutrition security of South African farm worker households from the micro-social perspective. In this respect, baseline information about farm dwellers and community infrastructure, household composition, food access and availability as well as perceptions of farm dwellers regarding their food and nutrition situation were explored (HEUMANN 2006). The findings of the latter built the basis of the second sub-study, conducted from 2006 to 2010, which is presented here. Within both sub-studies, extensive field work in South Africa was carried out from 2004 to 2008.

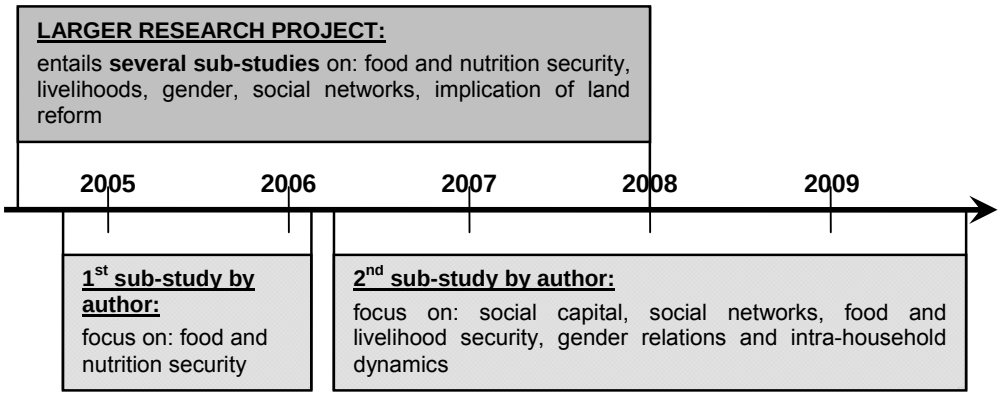


Figure 5.1.2: Setting of the author's sub-studies within the larger research project and time frame

5.2 Research design: A qualitative network research

This study follows a social science approach using a mixed methods design that combines qualitative research strategies with quantitative network analysis strategies.

The primary method that guides this study is of qualitative nature. According to DEZIN and LINCOLN (2005: 3), qualitative research:

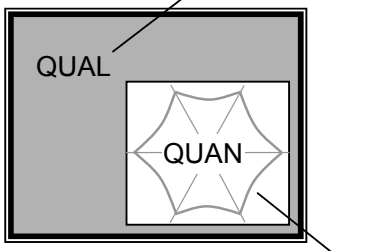
> "involves an interpretative, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them." (DENZIN / LINCOLN 2005: 3).

Qualitative research design explores and understands the meaning participants give to a social or human problem with the intention to render the complexity of a situation (CRESWELL 2009: 4). Other main characteristics of qualitative research are a detailed description of the social realities, inductive reasoning from particular to general themes, a holistic analysis concentrating on relationships between emerging themes, and a flexible and unique research design which evolves throughout the research process (FOUCHÉ / DELPORT 2005: 75).

The strategy of inquiry of this qualitative study is the phenomenological strategy which aims to understand and interpret the meaning individuals give to their everyday lives (FOUCHÉ 2005: 270). CRESWELL (2009: 13) regards a phenomenological study as a way of understanding the lived experiences whereby "the researcher identifies the essence of human experiences about a phenomenon as described by the participants" (CRESWELL 2009: 13). To accomplish this, MOUSTAKAS (1994, cited by CRESWELL 2009a: 13) states that a small number of participants and prolonged engagement is required to develop patterns and relationships of meanings.

To reveal the structure and function of social networks of farm dwellers, a quantitative network approach is embedded as an important section within the qualitative frame of this study. The focal point of network research is the characterisation of relationships among social entities as well as their structures and implications. Within network research, distinct methods and analytic concepts are employed which derive from social theory, empirical research, formal mathematics and statistics (WASSERMAN / FAUST 1994: 3).

Both qualitative and quantitative data were collected concurrently. According to CRESWELL (2009: 214), the strategy applied here is the so called '*concurrent embedded design*' (see figure 5.2.1).



QUALITATIVE CHARACTERISTICS	
Strategy:	Phenomenology
Practices of research:	Small study sample, prolonged field engagement; purposive sampling; inductive reasoning; flexible & sensitive research design; detailed descriptions
Data collection:	Collection within the participants' natural setting; qualitative face-to-face interviews; key-informant interviews; focus group discussions; observations
Data analysis:	Holistic & interpretative analysis; descriptive statistics

QUANTITATIVE CHARACTERISTICS – NETWORK RESEARCH	
Data collection:	Name generators and name interpreters
Data analysis:	Descriptive statistics; correlation; correspondence analysis; graphical analysis

Figure 5.2.1: Overview of the applied concurrent embedded research design: A primarily qualitative design embedding quantitative network methods (adapted from Creswell 2009: 210)

Figure 5.2.1 illustrates how both qualitative and quantitative approaches are married within this study. The qualitative paradigm builds the frame of the study which is characterised by a phenomenological strategy and an inductive analysis process. Emphasis is laid on a microsocial and gender-specific perspective. Throughout a period of four years, the researcher regularly visited 69 farm dwellers in their homes on three commercial farms and in one informal settlement situated within the farm area. The specific setting of commercial farms with its paternalistic structures as well as the social and physical isolation of farm dwellers required a sensitive and flexible research design throughout the research process.

To investigate the structures and characteristics of farm dwellers' social networks, the quantitative network approach is an indispensable part within this research. The structures and characteristics of individual social networks can only be determined by quantitative network methods. For the most part, the ego-centric network approach was applied to capture the extent of farm dwellers' social support networks and the role of their alters (associates), not only within the boundary of the farm area but also in distant rural or urban areas. Since almost all farm dwellers within each community (a defined boundary) have been interviewed, a complete graphical network analysis was additionally performed to visualise network structures within the farm communities.

The combination of both qualitative and quantitative methods allows in-depth insights into social support networks of farm dwellers, including structural elements and patterns as well as farm dwellers' experiences, expectations and motives behind their actions.

It can further be seen in figure 5.2.1 that several data collection methods such as qualitative face-to-face interviews, focus group discussions, key-informant interviews and observations were employed. Specific network questions, known as name generators and name interpreters, were included in the structured open-ended interview questionnaire. Data was analysed qualitatively, using descriptive statistics, coding and interpretations. The quantitative network data was analysed separately with descriptive statistics, correlations and correspondence analysis. At a later stage, qualitative and quantitative data were merged and jointly interpreted. The combination of multiple methods in data collection and analysis enables triangulation and thus validation of the data.

The following chapters will give a more detailed description of the strategies applied when entering the field and gaining access to the farm communities. Thereafter, the selection of participants and sample size as well as methods of data collection and analysis are illustrated. Lastly, the role of the researcher, ethical considerations, trustworthiness and limitations of this study are discussed.

5.3 Gaining access to the farms and building relationships with farm dwellers

5.3.1 Gaining access to the farms

Research was carried out in four different settings (three commercial farms and one informal settlement) in the North West Province in South Africa. Two farm schools which had been selected to participate in the FLAGH programme served as a starting point to establish contact to the farm owners of the three commercial farms. Most workers employed on the farm live with their families on the premises of the farm owner. Permission to carry out research on the selected farms was obtained by the project leader in 2004. The researcher visited the farm owners for the first time in October 2004, to introduce herself and explain the purpose and methods of her study. Throughout the whole research process, the larger research team regularly visited farm owners to inform and update them on the progress. Additionally, three feedback meetings were held where preliminary findings were presented and experiences regarding the research process were exchanged. Farm owners and their wives have been very interested in the research and were always supportive with providing background information and organisational assistance. During the four years of research, a very good relationship with the farm owners was built which was of immense importance for successfully conducting this research.

Furthermore, one informal settlement which is situated within the boundaries of one of the farms was included as many inhabitants work or have worked on the surrounding farms.

5.3.2 Building relationships with farm dwellers

To gain access to the farm communities and to make contact with farm workers and their families, it was necessary to overcome the language barrier. Since most farm dwellers in this area speak the native language seTswana, the researcher worked with a local field assistant who speaks both seTswana and English.

Due to the qualitative nature of this research and the aim to gain in-depth information of farm dwellers' lives over a longer period of time, it was of utmost importance to establish relationships of trust whereby participants were comfortable with the research process and felt relaxed towards the researchers. Hence, based on LEMKE (2001: 76-75, 94) a flexible and sensitive approach was applied, using different strategies to gain trust from the participants. In the following, all trust-building strategies are described in detail:

Introductory meetings

In October 2004, several introductory meetings with farm dwellers were held by the research team to give detailed information concerning the research. In these meetings, it was particularly stressed that confidentiality and voluntary participation was ensured throughout the whole research process. On the first farm, named **Ouplaas**[10]**,** the members of the research team introduced themselves to mainly male farm workers during one of their daily morning meetings. Shortly afterwards, farm workers were visited at home to introduce the researchers to the whole family and to explain the aim of the study again. By then, most people had already heard of the researchers. On the second farm, named **Koppiesplaas**, mainly female farm dwellers were visited on an individual basis, with researchers introducing themselves by walking from house to house. After several visits, the research team still felt that the women who had been visited so far were shy and reserved towards them partly because they were unsure whether their male partners would approve. Therefore, an additional meeting was held with their husbands or partners. Thereafter, both women and men felt more comfortable with the researchers. On the third farm, **Vlakteplaas,** a teacher from the nearby farm school introduced the research team to the farm dwellers. She initiated a meeting with farm dwellers and explained who the researchers were and what they planned to do. In the **informal settlement**, the research team walked from house to house to introduce themselves to individuals.

Individual follow-up visits

After the introductory meetings, households at each farm were visited again for informal conversations and further explanations of the research process. Only when the researcher sensed that participants were comfortable with the research team's presence, the first interviews were conducted. From 2004 to 2008, several field phases were carried out within the two sub-studies conducted by the researcher. Between the interview phases, the research team continued visiting the farm area regularly to stay updated on events as well as to keep in touch with participants and thus strengthening the relationship of trust.

Feedback meetings

In September 2006, the researcher organised a feedback meeting with all farm dwellers who participated in the first sub-study (HEUMANN 2006). Research findings as well as the purpose of the second sub-study were presented to farm workers and their families. During this meeting, all farm dwellers expressed their contentment with the research design and ensured their participation in future research.

---

[10] To protect the anonymity of farm owners and farm dwellers, all investigated farms are named with fictive names which do not have any connection to the original name of the farms.

After some female farm dwellers raised the urge for HIV/AIDS education, the researcher organised two HIV/AIDS information evenings in cooperation with the HIV/AIDS office of the North-West University in June 2008.

Participation in social events

The research team participated in several social events taking place in the farm area, such as school opening, land restitution celebration, governmental social cluster day, monthly pension and market day as well as church service.

5.4 Selection of participants: Sampling methods and sample size

According to the qualitative paradigm which frames this study, non-probability sampling techniques have been applied since not the quantity but the quality of information was the decisive factor for sampling methods and sample size. The researcher herself carried out fieldwork in four different sites in the North West Province over a period of four years. Therefore, the number of participants was determined by the researcher's ability to strategically follow-up with them during the time and to gain a holistic picture and an in-depth understanding of the participants' day-to-day actions and interactions. Participants were black adults who work or live on the selected farms where access was allowed by farm owners. Moreover, inhabitants of one informal settlement were included since most of them either work or have worked on commercial farms within the surrounding area. Additional selection criteria were the willingness to participate in the study and the ability to speak either seTswana or English.

Field research employed different data collection methods and hence, different sample sizes were chosen. Table 5.4.1 provides an overview of sample sizes and sampling methods according to data collection methods.

Table 5.4.1: Sample sizes and methods according to data collection methods

Data collection method	Sample size					Sampling method
	Ou-plaas	Koppies-plaas	Vlakte-plaas	Inf. Settle-ment	Total	
Structured open-ended interviews						
Male	*17*	*7*	*7*	*6*	*37*	**Purposive & snowball sampling**
Female	*16*	*5*	*5*	*6*	*32*	
Total	**33**	**12**	**12**	**12**	**69**	
total households	21	8	9	11	49*	
In-depth Interviews (life histories, social problems & farm eviction)						**Purposive sampling**
Male	-	*7*	-	*1*	*8*	
Female	-	*7*	*1*	*1*	*9*	
Total	**-**	**14**	**1**	**2**	**17**	
Focus group discussions						
Male	8	-	-	-	8	
Female	11	-	-	-	11	
Total	**19**	**-**	**-**	**-**	**19**	
Key-informant interviews						
Male	*2*	*1*	*1*	*2*	*6*	
Female	*3*	*1*	*4*	-	*8*	
Total	**5**	**2**	**5**	**2**	**14**	
Observations	**During field visits and interviews.**					

* including 18 conjugal households where both partners were interviewed.

As shown in table 5.4.1, structured open-ended interviews were carried out face-to-face with 69 farm dwellers living in 49 households, including 18 conjugal households where both partners were interviewed. Due to the different types of settings, two different sampling strategies, namely purposive and snowball sampling were applied. On the three commercial farms, 57 participants were purposefully selected (STRYDOM / DELPORT 2005: 328) with the aim to interview at least one person from all households residing on the farm owner's premises. In the informal settlement, twelve participants were selected by snowball sampling (STRYDOM / DELPORT 2005: 330). Using this method, the researcher began to interview a few residents and asked them to recommend or introduce the researcher to other residents who might be interested to participate. This strategy was applied because the informal settlement is less structured and has a high density of shelters under insecure tenure rights with a rapid population growth. No clear social structures, e.g. police service, are in place which meant limited safety for the research team. Thus, knowing and getting referred to trustworthy people secured safety. The disadvantage of this method is that it identifies the cases in a specific network only.

Several in-depth interviews were carried out with 17 participants, including life histories as well as interviews regarding general social problems and farm eviction. Three women who participated in this research from the beginning were purposefully selected for life-history interviews, whereby their age, socio-economic status and household composition were the decisive selection criteria. One male and one female farm dweller were selected for in-depth interviews regarding social problems on farms. Their gender, health status and duration on farm were the selection criteria. Furthermore, 14 farm dwellers in Koppiesplaas were interviewed after the farm was sold and the new farm owner wanted them to leave the premises and move somewhere else. For all in-depth interviews, a trustful and frank relationship between the research team and the participants was crucial to successfully gain detailed and valid data.

Focus group discussions which were carried out by two research assistants in 2005 were included in this study to incorporate supplementary information about gendered perspectives on livelihood security. Eleven female and eight male farm dwellers in Ouplaas were interviewed in two separate groups.

To gain a more comprehensive understanding about the general social situation of farm dwellers, internal and external perspectives were captured through structured and unstructured key-informant interviews. Fourteen key-informants either living or working within the farm area were purposefully selected, including farm owners (n=3) and their wives (n=3), shop owners (n=2, male and female), teachers of a farm school (n=2, both female), social workers (n=2, both male), a nurse of a mobile health clinic (n=1, female) as well as a student church leader (n=1, female).

Observations of all 49 households and events occurring within the farm area were carried out and recorded throughout the research process.

5.5 Methods of data collection

In the following chapters, all methods employed in this study will be described in detail.

5.5.1 Qualitative face-to-face interviews: Gaining in-depth information of farm dwellers

Qualitative interviewing was the main research tool used in this study. Different types of face-to-face interviews were conducted, such as structured open-ended interviews, household food situation questionnaires, follow-up interviews and in-depth interviews. Through qualitative interviews farm dwellers were encouraged to describe their world in their own terms, enabling the researcher to gain insights into their daily life and to learn about their feelings, thoughts, experiences and expectations (RUBIN / RUBIN 1995: 2).

All interviews with farm dwellers were conducted in the local language seTswana with the help of local field assistants. All interviews were carried out by the researcher and her field assistant who functioned as a team except for the structured open-ended interviews with male farm workers which were carried out by a male field assistant alone. Both assistants were familiarised with the research aims and received intensive training in qualitative interviewing skills before entering the field.

Interviews were tape-recorded with permission from interviewees. Recording interviews on audiotape allows the researcher to concentrate on what is being said, plan follow-up questions and be less concerned with losing relevant information (RUBIN / RUBIN 1995: 126). Additionally, key messages given by interviewees were written down by the researcher to provide backup in case of technical problems with the tape recorder.

Interviews took place either in the interviewees' homes or at their work place which was the case when interviewing male farm workers. The interview procedure was adjusted to the specific situation of each setting ensuring privacy and comfort for the interviewees.

Qualitative interviews follow the rules of normal conversations, whereby the researcher asks specific questions, guides and leads the flow of topics, and encourages the interviewee to reply in depth and at length (RUBIN / RUBIN 1995: 124). The researcher further guides the emotional tone and intensity of the interaction by building on different interview stages (RUBIN / RUBIN 1995: 129). Though interview stages applied by the research team were similar in all conducted qualitative interviews, they were altered or modified according to each individual situation. The different stages were used in a flexible manner and often blended into each other. A description of the interview stages based on RUBIN and RUBIN (1995: 128-139) is given below:

1. *Creating a natural environment:* The visit starts with an informal chat e.g. about weather, work, holidays, social events or greetings from family members whom the researchers met on other farms. In this way, interest in and a supportive

attitude towards the interviewee's life and work is shown. Then the interviewee is asked whether s/he has time to do an interview. If it is not convenient to conduct the interview, the research team makes an appointment for another time.

2. *Obtaining consent:* The research team gives detailed information about the purpose of the study and what is expected from the interviewee. It is stressed that confidentiality is ensured and that the interviewee has the right to break off the interview whenever s/he feels uncomfortable. Furthermore, time is given for questions to the research team. Then, the interviewee is asked whether s/he is willing to do the interview.
3. *Introducing the voice recorder:* After the interviewee, field assistant and researcher have found a comfortable place to conduct the interview, the voice recorder is introduced. Only when the interviewee agrees, the interview is recorded on tape.
4. *Encouraging conversational competence:* Before starting the interview, the research team assures the interviewee that s/he is competent and that the research team is interested in what s/he has to say. Phrases like, "We want to learn from you, about your life", are used by the research team to signal to the interviewee that s/he is the expert about her/his own situation and that his/her personal experiences will frame the discussion.
5. *Showing understanding:* Several verbal and non-verbal communication skills were applied to encourage interviewees to talk frankly and to show that attention is paid to their responses. Non-verbal communication was applied by the researcher to show understanding with an open body language, e.g. posturing of body, eye contact, facial expressions or nodding. Verbal communication skills, like brief statements of sympathy or neutral encouraging comments, e.g. "Oh, I see." Or "That's interesting. Tell me more about …", as well as changing the tone of voice were employed to show actual and emotional understanding (GREEFF 2005: 289-290).
6. *Getting facts right and detailed*: To obtain basic information and in-depth responses, several verbal communication skills like clarification, reflection, summarising, probes and follow-up questions were applied. (GREEFF 2005: 189-290).
7. *Guiding to an end:* The research team guides the interview towards an end and asks the interviewee whether s/he has any questions. When all questions are answered, the research team thanks the interviewee for his/her assistance in the research and switches the voice recorder off.

As described in chapter 5.3.2, a good relationship between the researcher and participants was established during the first sub-study from 2004 to 2006 as well as

through feedback meetings and ongoing engagement. Hence, most farm dwellers were familiar with the research proceedings and felt comfortable and at ease to talk frankly to the research team.

Several types of qualitative face-to-face interviews with farm dwellers were carried out by the research team. Structured open-ended interviews and household food situation questionnaires were carried out with all participants, whereas follow-up interviews and informal conversational interviews as well as in-depth interviews were conducted with a purposefully selected sub-sample (see chapter 5.4.). Characteristics and contents of all types of interviews are described below.

Structured open-ended interviews

Structured open-ended interviews (RUBIN / BABBIE 2005: 452) (see appendix 1) were carried out with 32 female and 37 male farm dwellers. Interviews with male farm workers were conducted by a male field assistant because it was expected that male workers would feel more at ease to talk to a male interviewer who has the same cultural background. Due to long working hours, male farm workers were difficult to reach for the research team. When approaching them after work and on weekends, they were often tired and busy with their household or other private arrangements. Therefore, permission from farm owners was obtained to interview the male workers during working hours. All other participants were interviewed in their homes during their free time.

Since interviews were not only carried out by the researcher and her field assistant but also by a male field assistant alone, it was essential to use a structured interview schedule. This schedule ensured that all interviews were conducted in a consistent and thorough way by all interviewers, obtaining the necessary in-depth information as well as minimising the personal effects and biases of the interviewer (RUBIN / BABBIE 2005: 452). In this way, comprehensive and comparable data was gained which allowed coding of responses as well as applying descriptive statistics for the analysis (GREEF 2005: 292). The interview structure still allowed a certain degree of flexibility for probes and follow-up questions whenever important information arose which might not have been included in the interview structure.

Before starting the interview phase with farm dwellers, a pilot study was conducted to test the interview questionnaire, involving a small number of South African students. By interviewing the students, the researcher tested the length of the interview and whether the questions were clearly understood. Moreover, she got familiar with the interview procedure and practiced the flow of the interview. Additionally, the researcher asked research assistants to interview her so that she obtained a feeling of how the interview questions are perceived by the interviewee. The pilot study further enabled her to sense the interviewee's reactions towards sensitive or difficult questions whereupon she practiced to appropriately respond to it.

The structured open-ended interview encloses two sections: one qualitative and one quantitative section. While the **qualitative section** contains open-ended questions, the **quantitative section** entails network data collection tools, such as name generators and interpreters as well as closed questions regarding characteristics of the ego-alter-relationship. These are standard techniques for collecting ego-centric network data. *Name generators* enumerate alters who belong to the ego's network by asking with whom they share relations. *Name interpreters* collect further defined details, such as socio-demographic data, of all mentioned alters (BURT 1984: 296-297, SCHWEIZER 1996: 245-249, JANSEN 2006: 80). In this study the name generator listed names of actual and potential relations. Actual relations are relationships with persons who are in regular contact with the interviewee and who either live on the same farm or outside of the farm. Potential support relations are enumerated through hypothetical questions focussing on material, financial, caring, emotional and lodging support. The latter hypothetical questions are adapted from SCHWEIZER, SCHNEGG and BERZBORN (1998) and were adjusted to the specific farm set-up. Contents of both qualitative and quantitative sections are displayed in the following table:

Table 5.5.1: Contents of qualitative and quantitative sections of the structured open-ended interview, indicating questions of the applied questionnaire (see appendix 1)

Contents	Question (Q) of questionnaire
QUALITATIVE SECTION	
Individual and household characteristics, situation foster children	Page 1 & Q 1-3
Income sources and level of income	Q 4;5
Intra-household resource allocation	Q 6-12
Assets & savings	Q 13-15
Former living and working places	Q 30-33
Satisfaction with working and living situation, future plans	Q 34-37
Social capital resources	Q 38; 39
Decision-making within the household	Q 40-42
Perceptions regarding the land claim*	Q 43-45
QUANTITATIVE SECTION	
Name generators = list of alters who:	
- live in same house (excluding children), on the same farm or outside of the farm	Q 1;16/17; 18/19
- are mentioned during potential support questions (material, emotional, assisting, financial and lodging support)	Q 20-29
Name interpreters = details of alters:	
- gender, age, occupation, place of residence (farm, rural, urban) and distance	Tables of Q1; 16/17; 18/19
Characteristics of ego-alter-relationship:	
- type of relationship & closeness#	Tables of Q 1; 16/17; 18/19
- frequency of visits & reciprocity	Tables of Q 16/17; 18/19
- exchange of food, non-food and money & reciprocity	Tables of Q 16/17; 18/19
- potential support:	
. material	Q 20; 28
. emotional	Q 22; 23
. caring/assisting	Q 21; 24; 25
. financial	Q 26; 27
. lodging	Q 29

* Questions regarding the land claim were asked in Ouplaas, Koppiesplaas and the informal settlement. These settings are directly affected by the land claim.

To determine the closeness of the relationship between the interviewee and his/her alters a closeness scale (see appendix 2) was employed during the interview. Using this procedure, the interviewee was asked to select the image that represents best the relationship to each of his/her alters.

Interview questions were the same for men and women with the exception of questions regarding changes within household composition (Q1.1), biological children living somewhere else (Q2) and foster children in the house (Q3). Because of time constraints these questions were not posed to male interviewees who were interviewed during their working hours.

The duration of the interviews lasted between 45 minutes and 1.5 hours, mostly depending on the interviewee's elaborations and on the extent of his/her social network size.

Household food situation questionnaire

For assessing the household food situation a separate questionnaire (see appendix 3) was employed, containing closed and open-ended questions which have been adopted from LEMKE (2001). Questions were posed after the structured open-ended interview. The following topics were included:

- household food availability,
- worries about and problems getting food,
- times of food shortage and hunger, affecting participants and children,
- food preferences, and
- existence of vegetable garden and livestock.

Data of the household food situation were collected from 44 households whereby data from twelve households was collected during the researcher's first sub-study (2004-2005) and data of the other 32 households was obtained during this study (2006-2008). In cases where the researcher felt that the food situation had changed, the household food situation was re-assessed. In most cases women were interviewed regarding their household food situation, however, ten men who live alone on the farm were interviewed on this issue, too.

Follow-up interviews and informal conversational interviews

After the transcription of the structured open-ended interviews, several uncertainties and follow-up questions occurred, which were clarified by short semi-structured follow-up interviews with five female and 14 male farm dwellers.

Moreover, the research team carried out innumerable informal conversational interviews throughout the whole research process. This type of unstructured and open-ended interview occurs naturally and spontaneously during the course of fieldwork to pursue relevant information that evolves from the immediate context or situation (RUBIN / BABBIE 2005: 447). In doing so, the research team maximised the understanding of day-to-day experiences of farm dwellers, being able to capture and follow-up unforeseeable and previously unnoticed relevant information.

The informal conversational interview has no predetermined set of questions and it largely follows the rules of normal conversations: interviewer and interviewee take turns speaking, they clear up misunderstandings and clarify ambiguities, they acknowledge what has been said, only a few topics are covered in depth, and there are smooth

transitions between the topics (RUBIN / RUBIN 1995: 122-123). However, the researcher's task is to gently guide the conversation, to ask specific questions, and to encourage the interviewee to answer in-depth and at length (RUBIN / RUBIN 1995: 124). Mainly sensitive themes which could not be addressed during the structured open-ended interview were approached by informal conversational interviews. Main themes are listed below:

- livelihood changes and causes,
- financial problems and consequences,
- personal, family and intra-household problems, including domestic violence,
- social implications of isolation and poverty, including alcohol abuse and crime,
- power-relations between farm owners and workers,
- perceptions regarding HIV/AIDS, including social consequences,
- network changes over time and their causes, and
- health problems.

Answers of the informal conversational interviews were recorded in the researcher's field book.

In-depth interviews: Life histories, HIV/AIDS, general social problems and farm eviction

Life histories, interviews about HIV/AIDS, general social problems and the state of farm eviction were conducted as in-depth interviews, using the interview guide strategy. An interview guide compiles pre-established questions but it allows the interviewer to be flexible in sequencing and wording as well as to remain conversational and free to probe into relevant matters (RUBIN / BABBIE 2005: 450).

Life history interviews (see appendix 4) were performed with three female farm dwellers. Using this method, the researcher gathers deep and rich descriptions that reveal how the participant understands significant events and meanings in his/her own life (RUBIN / BABBIE 2005: 452). Main themes approached during the life history interview were living circumstances and the food situation during different life stages, changes of residences and reasons for moving as well as important persons during different life stages.

To gain in-depth information about the *situation of HIV-infected persons* living on farms, a case study interview (see appendix 5) was conducted with one male HIV-infected farm dweller. The interview focussed mainly on living circumstances, household food situation, support structures within the family and community as well as availability of social and health services.

General social problems within the farm communities were addressed through an in-depth interview (see appendix 6) with one female farm dweller. Main issues discussed were social capital sources, crime, alcohol abuse and perceptions regarding HIV/AIDS.

In addition, in-depth interviews about *farm dwellers' situation during a farm eviction* (see appendix 7) were carried out. Interviews with seven male and female farm dwellers, respectively, were conducted right after Koppiesplaas was sold to a new owner and notifications of evictions had been handed over to the farm dwellers. Focal points of the interviews were the time of notification and the person who delivered the message, perceptions and feelings about the situation as well as personal consequences and future plans.

5.5.2 Focus group discussions with farm dwellers: Gaining an interactive understanding

In order to collect supplementary information about gender views on livelihood security, two focus group discussions were held with one female and one male group with eleven and eight participants, respectively. All women and men who participated in the group discussion reside in Ouplaas. Moreover, all men were permanently employed workers in Ouplaas. Focus group discussions are group interviews that assemble data through group interactions on a subject defined by the researcher (MORGAN 1997, as cited by GREEFF 2005a: 300). The group dynamics that lead the discussions bring out unanticipated topics that would not have emerged in individual interviews (RUBIN / BABBIE 2005: 454).

Topics discussed within the focus groups were the following:

- identification of determinants of a good and bad year,
- determination of different wealth groups living in the community,
- main livelihood elements, including sources of income and food,
- household decision-making,
- problems faced by people living in the community, and
- coping strategies.

Focus groups were carried out by two seTswana speaking research assistants who functioned as one facilitating team, consisting of a facilitator and an assistant facilitator with each of them performing certain tasks. The facilitator primarily moderated and directed the discussion, keeping the conversation going through encouraging participation and probing on responses without biasing them (GREEFF 2005: 307). The assistant facilitator stayed in the background, assisting with logistics, operating the tape

recorder, observing the dynamics and taking comprehensive notes as well as handling unexpected disturbances (GREEFF 2005: 307).

5.5.3 Key-informant interviews: Gathering peripheral perspectives

Qualitative face-to-face interviews were conducted with key-informants who either live or work on the selected sites, gathering different points of view and additional perspectives about the situation of farm dwellers. Structured open-ended and informal conversational interviews were carried out (see appendix 6), following the procedures and techniques described in chapter 5.5.1.

Structured open-ended interviews were conducted with one farm owner's wife, two farm school teachers, two social workers, one mobile clinic nurse and one student preacher of a farm church. The interview was adjusted to each key-informant, however, the main topics approached were the following:

- interviewee's roles, tasks and activities within the farm community,
- general living conditions and situation within the farm community,
- problems faced by farm dwellers,
- HIV/AIDS in the community: perceived situation, education, social consequences, faced difficulties, and
- available support structures for farm dwellers.

In addition, innumerable informal conversational interviews were carried out with farm owners and their wives, shop owners, school teachers and social workers, approaching various themes which emerged throughout the research process.

5.5.4 Observations: Getting a holistic view

In this study, participant observations were applied throughout the research process. According to MONETTE, SULLIVAN and DEJONG (2005: 222), observation is a method in which the researcher observes people in their natural setting to learn about their social world by personally experiencing that world. It enables the researcher to gain insights and understanding of their everyday social lives. There are different ways the researcher can be involved in the field, ranging from being a complete participant on the one hand to being a complete observer on the other hand, with several mixed forms in between. In this study, the researcher took the role as *observer-as-participant* (GOLD 1969, as cited by RUBIN / BABBIE 2005: 432), whereby the researcher participated in the social life of farm dwellers while the latter were informed and aware of the research purpose and the researcher's role. This brought along the risk that the

research team's presence in the setting might have influenced the behaviour of farm dwellers. However, since the research team visited the people regularly throughout a period of four years, people got used to the research team's presence and they were accepted as a part of their social world. Hence, the researchers' influence on the research setting was minimised.

Mainly through house-to-house visits, the researcher observed how farm dwellers live in their environment, which actions determine their everyday life, how they act and interact with other people, what kind of responsibilities they have and which constraints they face. Often those observations were linked with informal conversational interviews, directly following-up on emerging situations for a better understanding. Moreover, the research team accompanied farm dwellers when going to the market or grocery stores, mobile clinics and hospitals in urban areas, church services and other social events as well as visiting relatives on nearby farms.

Observations also played an important role for collecting additional qualitative network data. Valuable information was gathered on interactions and relationships between people, for example who relatives and friends were, where and how often people met and what activities they did together.

Observations were recorded in a field book during or immediately after all field visits. These observations did not have a specific focus and were unstructured. Daily actions, behaviours and perceptions of farm dwellers, interactions between people, informal conversational interviews as well as researchers own impressions and feelings were written down in the field book.

Additionally, photos were taken for visual documentation.

5.6 Data analysis: From bits and pieces towards a comprehensive understanding

Using the mixed methods design, qualitative and quantitative data were collected and the data analysis involved both qualitative and quantitative strategies. Figure 5.6.1 gives an overview on analysis procedures applied in this study according to the different data sources.

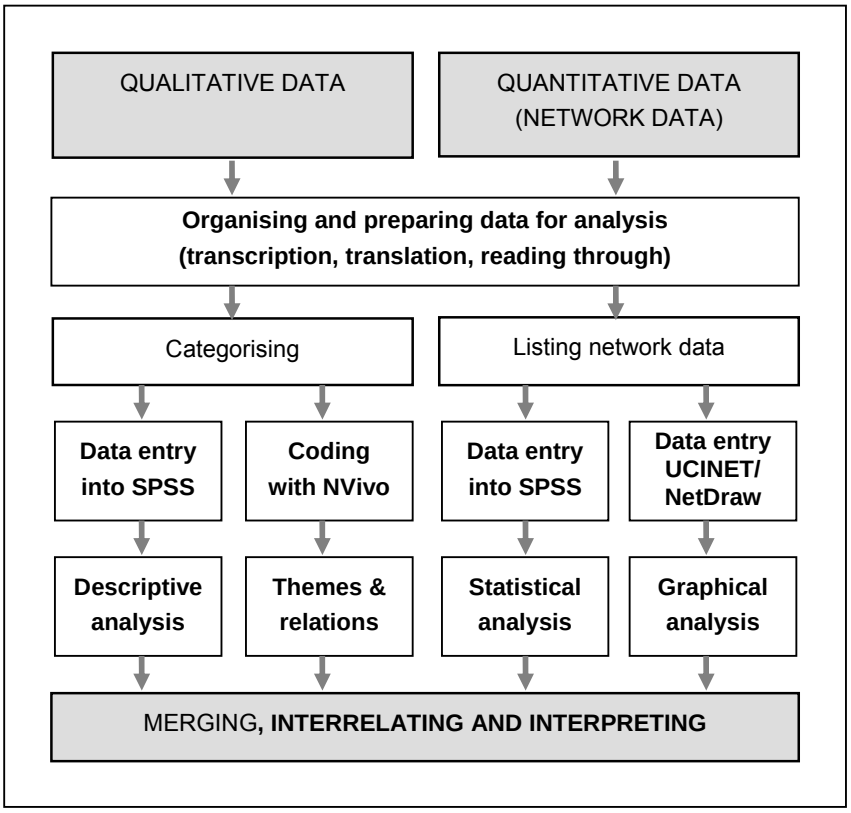


Figure 5.6.1: Data analysis procedures according to qualitative and quantitative data sources

The figure above displays a hierarchical order of analysis stages, however, in reality these stages were often interrelated to gain a complex and holistic understanding of the matters investigated. The qualitative analysis, especially, was an ongoing process with continuous reflections and was performed in the field during and after the data collection. The first step after data collection was the organisation and preparation of the data, including reading through all data. Then the analysis was divided according to the nature of data source: 1) Categorising of qualitative data; and 2) listing of quantitative data. According to each branch, data was analysed using the statistical software SPSS (SPSS Inc., version 15-17), the qualitative research software NVivo (QSR International, version 7) or the network visualisation software NetDraw

(BORGATTI 2002, Analytic Technology, version 2.086) which is an integrated part of the social network analysis software UCINET (BORGATTI, EVERETT, FREEMAN 2002, Analytic Technology, version 6.221). At the final stage, all findings, emerging concepts and themes were merged, interrelated and finally interpreted. The following chapters will give a detailed description of procedures applied during the data analysis.

5.6.1 Organisation and preparation of data

Organisation and preparation of data are the first steps of analysis. In order to organise the data, the researcher established an inventory (DE VOS 2005: 336) of completed and outstanding interviews at an early stage of this study. In this way, an overview was built on available data sources and completeness of the data.

To prepare data for analysis, all interview tapes needed to be transcribed and translated into English. Two bilingual research assistants transcribed all interview tapes in seTswana and subsequently translated them into English. For ensuring equivalence of meaning from one language to another, some interviews were translated twice by different assistants. Hand written field notes from the field book were typed up by the researcher.

All data was computerised, labelled (with type of interview, interviewee number, place and date) and organised in different files and folders to easily access them during the analysis. Additionally, files were formatted to be compatible with the different computer programmes used during analysis.

After the organisation and preparation of the data, the researcher read through the entire data several times to become familiar with the data and to gain a general picture of the information. Additionally, first upcoming thoughts and concepts were noted and first categorisations of information were done (CRESWELL 2009: 185).

5.6.2 Analysis of qualitative data

Qualitative data was obtained through structured open-ended interviews, informal conversational interviews, in-depth interviews, focus group discussions, interviews with key-informants and observations. The core of analysing this data lies in *category* building which is characterised by building broader concepts and themes through abstracting and generalising meaning units from the raw data (MONETTE, SULLIVAN and DEJONG 2005: 430). Two different strategies were applied to analyse qualitative data: 1) structured open-ended interviews were analysed with descriptive statistics using SPSS (SPSS Inc., version 15-17); and 2) all other interview and observational data

were analysed through coding using NVivo (QSR International, version 7). Both analysis procedures are described below:

Quantifying qualitative data with descriptive statistics using SPSS

The SPSS database was created with variables based on questions of the structured open-ended interview. Values to each variable were established through categorising responses of transcribed and translated interview questions. During data entry, responses were put into preliminary categories almost identical to the meaning or wording of the interviewee's response, resulting in a relatively high number of values. At a later stage, when all data was entered and an overall picture of the answers was gained, the preliminary categories were summarised and recoded into broader themes, thus narrowing them down to a smaller number of categories.

Even though the SPSS analysis depends on a strong categorisation of values, the initial responses (preliminary categories) were not forgotten within the analysis. Significant statements were tagged and selected for further qualitative analysis, involving interpretations and detailed descriptions.

In order to statistically analyse the categorical data, frequency statistics were applied (FIELD 2005: 682).

The few numerical data (e.g. age, duration of stay on farm, number of household members, distances, income) were calculated with simple descriptive statistics, like mean, median, minimum, maximum and standard deviation. To illustrate gender differences in income levels, boxplots (also called box-whisker diagrams) were created which display the distribution of the data determining the interquartile range (box), the median (band within the box), the lowest and highest scores of the data (lower and higher end of the whisker, respectively) and outliers (FIELD 2005: 75). Since most numerical data did not meet the assumption for parametric tests, Mann-Whitney Tests (*U-statistics*) and Kruskal-Wallis Tests (*H-statistics*) were employed to compare two or more than two means, respectively. Only in one case parametric assumptions were met to employ an Independent t-Test (*t-statistics*). In all tests, a significance level of less than .05 indicates a significant difference between compared means.

For categorical data, contingency tables were produced, using SPSS's crosstabs procedure to calculate frequencies that fall into each combination of categories. Along with the crosstabs procedure, Pearson's chi-square statistics and its significance value were calculated, detecting whether a significant association between two categorical variables exists. A significance value less then .05 indicates an association between the two variables.

Due to the open-ended nature of the questionnaire, most responses enclosed more than one statement, resulting in several SPSS variables for one question with the same

values. Therefore, multiple response statistics were applied, also including frequencies and cross-tabulation.

In 18 conjugal households, the structured open-ended interview was conducted with both partners to gain insights into gender perceptions on intra-household dynamics. In this respect, a separate SPSS table was created with variables, opposing both male and female responses with regard to individual socio-economic and relationship characteristics, household resource allocation, emotional and assisting support between both partners and decision-making. Also here, frequency statistics, contingency tables and Pearson chi-square statistics were calculated.

Moreover, the level of agreement for responses of both partners was calculated with percentage agreement and kappa statistics. Percentage agreement (PA) is the simplest measure of agreement which is defined as the percentage of cases in which both raters provide congruent answers. PA is calculated as the sum of frequencies of congruent answers, divided by sample size and multiplied by 100 percent (WIRTZ / CASPAR 2002: 48). Box 5.6.1 illustrates the mathematical equation and calculation of PA. The equation is based on the sum of frequencies of the main diagonal of the contingency table (A), divided by the sample size (N) and multiplied by 100 percent. Table B exemplifies the PA calculation using a question of the structured interview applied in this study. In 18 households, both partners were asked who makes the decision regarding large purchases. As can be derived from table B, in nine households both partners agreed on the same person. The calculated PA is 50.0, saying that half of the total study sample (n=18) agreed with their partner (gave the same response).

Table A: Summary of multicategorical ratings by two raters
(adopted from WIRTZ / CASPAR 2002: 48)

		Rater 2				
		C_1	C_2	…	C_S	Σ
Rater 1	C_1	n_{11}	n_{12}	…	n_{1S}	$n_{1.}$
	C_2	n_{21}	n_{22}	…	n_{2S}	$n_{2.}$
	…	…	…	…	…	…
	C_S	n_{s1}	n_{s2}	…	n_{SS}	$n_{S.}$
	Σ	$n_{.1}$	$n_{.2}$		$n_{.S}$	**N**

The equation for PA is:

$$PA = \frac{n_{11} + n_{22} + ... + n_{SS}}{N} \cdot 100\%$$

Table B: Research example: Household decision-maker regarding large purchases as stated by men and women

		Responses of men			
		Man	Woman	Both	Total
Responses of women	Man	**0**	0	1	1
	Woman	0	**2**	5	7
	Both	2	1	**7**	10
	Total	2	3	13	**18**

The calculation for PA is:

$$PA = \frac{0 + 2 + 7}{18} \cdot 100\% = \underline{\underline{50.0\%}}$$

Box 5.6.1: Mathematical equation and calculation of PA (adopted from WIRTZ / CASPAR 2002: 48) and illustration of PA calculation using a research example

As part of the contingency tables (SPSS crosstabs procedure), Kappa statistics were calculated, too. Kappa statistic (κ) is a measure of agreement between two raters who each classify subjects into *N* categories. It is generally known to be a more robust measure than the simple percentage agreement calculation because it takes into account the proportion of agreement which is expected by chance (MACLURE / WILLETT 1987, WIRTZ / CASPAR 2002: 56). Kappa's equation is:

$$\kappa = \frac{P_o - P_e}{1 - P_e}$$

P_o is the total proportion of observed agreement among raters and P_e is the proportion of agreement expected by chance (MACLURE / WILLETT 1987, WIRTZ / CASPAR 2002: 56). The κ score can range from 1.0 (complete agreement of raters) to -1.0 (no agreement of raters at all). WIRTZ / CASPAR (2002: 59) give suggestions on how the kappa score can be categorised. Pursuant to these suggestions, the following table illustrates kappa categorisations and their interpretations which were applied in this research:

Table 5.6.1: Kappa scores and their interpretations (adopted from WIRTZ / CASPAR 2002: 59)

κ score	Interpretation
> 0.75	Very good agreement
0.6 – 0.75	Good agreement
0.4 – 0.6	Moderate agreement
0.0 – 0.4	Slight agreement
< 0.0	No agreement

Based on their equations, PA and Kappa can provide different results. Hence, both procedures are employed within this study to prevent misinterpretation of a single measure.

Coding data with NVivo

The heart of qualitative research analysis lies in coding and categorising the data to move deeper and deeper into understanding it (CRESWELL 2009: 183). Qualitative data from informal conversational and in-depth interviews with farm dwellers, focus group discussions, key-informant interviews and observations were analysed using NVivo, a qualitative software programme which helps coding, categorising, organising, and sorting relevant information.

In this study, the coding process is defined as the categorisation of observational and interviewing data into a limited number of themes and the subsequent exploration of interrelations among them to ultimately reveal their essential meaning (adapted from CRESWELL 2009: 186, MONETTE / SULLIVAN / DEJONG 2005: 430). Through the coding procedure, the immense amount of qualitative data will be reduced and simplified to its essential meanings, without quantifying the data or creating numerical categories (MONETTE / SULLIVAN / DEJONG 2005: 430).

All text documents of the qualitative data were coded. Thereafter, codes were categorised into broader themes which at the end built ten main domains. The specific research objectives of this study (see chapter 4.2) predetermined certain themes in which codes were categorised. Additionally, new themes emerged during the coding procedure. The final coding scheme entailed some combination of predetermined and emerging themes (CRESWELL 2009: 187). The coding scheme which evolved during the qualitative analysis is illustrated in Table 5.6.2:

Table 5.6.2: Coding scheme developed during the qualitative analysis

Domains	Coding themes
Activities	alcohol church community activities leisure time activities
Alterations & outreach of households	changes in household composition connection to urban areas moving
Constraints	dependency on others difficulties to obtain grants and IDs female specific constraints low educational level transport problems
Events	events initiated by farmers and outsiders land claim farm sale
Gender relations and dynamics	chores of women decision-making intra-household dynamics women's perceptions
Infrastructure	health service lack of clean water and sanitation facilities lack of electricity grocery shops in farm area
Livelihoods	access to food assets and savings income opportunities
Perceptions	future perspectives and wishes happiness & pride perceptions of farm life the 'outside' world traditional views worries, fears and insecurities
Roles and relationships	family and relatives farm owner people in the community
Livelihood threats	crime HIV/AIDS loss of job and eviction sickness and death

After the coding process, interconnections and interrelations between the different themes were conceptualised and captured in causality models. Furthermore, descriptions were generated which involved detailed pictures of the farm setting, activities, perceptions, relationships between people and case studies.

5.6.3 Quantitative analysis of network data

Network data was obtained with the structured open-ended questionnaire, using name generators and interpreters as well as questions about characteristics of the ego-alter-relationship. To get a holistic view on farm dwellers support networks, actual and potential support relationships to alters were collected. Factual visits and exchange between ego and alters are defined as actual relations. Ego's potential support relations were collected through hypothetical questions, asking who the ego would turn to in times of need with focus on material, assisting, emotional, financial and lodging support. The main characteristics of actual and potential support relations as well as relationships attributes and alter characteristics are summarised in table 5.6.3:

Table 5.6.3: Main characteristics of actual and potential support relationships as well as relationship and alter attributes

Subject matter	Characteristics	
Actual relations between ego and alter	Exchange of visits, meals, food items, small goods and money Frequency of visits and money exchange Reciprocity of exchange	
Ego's potential support relations	Material support:	help with small goods (e.g. matches, paraffin, candles) and food
	Assisting support:	assistance with filling in forms, and providing care during short and long illnesses
	Emotional support:	discussion of important matters, asking for advice
	Financial support:	borrowing of small or larger amount (> ZAR 1000) of money
	Lodging support:	provision of accommodation in case of leaving the farm
Relationship attributes	Relationship to ego (e.g. friend, neighbour, kin) Closeness (very close, close, a bit close, not so close)	
Alter attributes	Socio-demographics: sex, age, occupation (economic status), place of residence (farm, rural, urban) and distance	

The researcher decided to ask the interviewee about the occupation of alters mentioned during the interview but not about income levels. It was expected that the occupation of alters is better known than the exact income level and therefore, erroneous statements were avoided. Later, the occupation of alters as reported by the interviewee was categorised into economic status categories based on assumptions of

monthly income ranges according to the income that the majority of South African employees would earn in this field. Appendix 8 provides the economic status categories with all corresponding values, as reported by the interviewees. The economic status is defined by the following monthly income ranges:

Very low economic status	no income from employment
Low economic status	< ZAR 3,000
Middle economic status	ZAR 3,000 -10,000
High economic status	> ZAR 10,000

Network characteristics were analysed using SPSS (SPSS Inc., version 15-17) and the visualisation of networks was performed with NetDraw (BORGATTI 2002, Analytic Technology, version 2.086) which is integrated within UCINET software (BORGATTI, EVERETT, FREEMAN 2002, Analytic Technology, version 6.221). It is important to keep in mind that due to the mixed methods approach of this study, this quantitative analysis was also complemented with qualitative findings from observations and in-depth interviews.

Below both quantitative analysis procedures are described in detail:

Statistical analysis with SPSS

The methods used for the statistical analysis of the network data was largely inspired by previous work of SCHWEIZER, SCHNEGG and BERZBORN (1998) and SCHNEGG and LANG (2002).

For the statistical analysis of network data, two separate SPSS tables were created. The first one is an alter-centred table, comprising all alters and their actual and potential support relations to ego as well as alters' characteristics. The second one is an ego-network-centred table, comprising ego's characteristics, network sizes and features. To gain an extensive overview on network characteristics and usage as well as its role in farm dwellers' lives, several statistical analyses were performed with data from both SPSS tables. Table 5.6.4 summarises all statistical tests which were applied for network analysis with SPSS.

Table 5.6.4: Applied statistical test for network analysis with SPSS

Intention	Outcome variables	Predictor variables	**Parametric test**	**Non-parametric test**
Correlation between two variables	continues	continues	**Pearson Correlation**	**-**
Comparison of two means	continues	categorical	**-**	**Mann-Whitney Test** (*U-statistics*)
Comparison of more than two means	continues	categorical	**-**	**Kruskal-Wallis Test** (*H-statistics*)
Visualisation of association between variables	categorical	categorical	**-**	**Correspondence analysis**
Association between variables (using contingency tables)	categorical	categorical	**-**	**Pearson Chi-Square** *(χ^2-statistics)*

Frequency statistics, including calculations of means, minimum, maximum and standard deviation were applied to describe basic network characteristics. In most cases the data did not fulfil the assumptions for parametric tests. Thus, means were compared with the Mann-Whitney Test and Kruskal-Wallis Test (see table 5.6.4). A significance level of less than .05 indicates a significant difference between the compared means.

Contingency tables were produced to calculate frequencies that fall into each combination of categories. Along with it, Pearson's chi-square statistics and its significance value were calculated. A significance value less than .05 indicates that a significant association between the categorical variables exists.

Correlations of alter and relationship attributes with support relations were calculated, using the Pearson's correlation coefficient which is a standardised measure of bivariate correlations (FIELD 2005: 111). Within this context, it was used to describe relational characteristics which are displayed by a negative or positive algebraic sign of a significant coefficient. A positive algebraic sign indicates a positive correlation and a negative algebraic sign represents a negative correlation (FIELD 2005: 125).

Correspondence analysis is a multivariate data analytic technique which transforms a two- or multi-way contingency table into a two-dimensional scatterplot, in which each row and each column is displayed as a point. By creating this kind of scatterplot, complex relationships can be revealed that would not be detected with contingency analysis. Since the correspondence analysis has highly flexible data requirements, it is commonly used for categorical data. For interpretation of the plot, the distances between row points and the distances between column points are interpreted. Close distances between points disclose a strong similarity of the frequency profiles, whereas wider distances reveal less similarity. However, it should be avoided to interpret distances between row and column points, although, it is legitimate to interpret the

relative position of one point of a set and all points of another set (BACKHAUS et al. 2006: 686-747; for further information the reader is also referred to GREENACRE 2007). In this study, correspondence analysis was used to visualise relationships between support relation attributes and relationship attributes of ego and alter.

Graphical analysis with UCINET/NetDraw

The network visualisation software NetDraw which is integrated into the social network analysis software UCINET was used to visualise support relationships between interviewees who live on the three commercial farms. In contrast to the network analysis performed with SPSS which is based on an ego-centric network approach, this process is based on a complete network approach (see chapter 2.3.2). The condition for this type of analysis is that the set of actors includes all (or at least almost all) persons, belonging to a specific setup which is clearly defined by a boundary. In this study, the farm setting builds the boundary which defines the set of actors. On all three farms almost all farm dwellers living on the premises were interviewed, making a complete network analysis possible. Interviewees who live in the informal settlement were excluded since only a few persons were interviewed within the boundary of the informal settlement and thus, this data was not sufficient to analyse a complete network. Since support relations between partners and spouses are specific and different to other support relations between individuals, they were excluded within the graphical analysis to avoid distortions in the network picture.

Before drawing networks with NetDraw, the data needed to be transformed into a specific data format, encompassing two different lists with network data and attributes of actors, respectively. For a better understanding, box 5.6.2 illustrates the data transformation progress, using a simplified fictive example of food and money exchange between four persons, named Lemo, Za, Motso and Nat. First, the data has to be listed into a tie data format (see (A) in box 5.6.2) which entails information of existing support relationship between the actors. As seen in the example, Lemo supports Za with food and money; Za only supports Lemo with food. Second, the node data (see (B) in box 5.6.2) needs to be listed, including attributes of the actors. In the example actors are characterised by gender, e.g. Lemo is female and Motso is male. Finally, both tie and node data are merged and imported into NetDraw which visualises network graphs (see (C) in box 5.6.2), indicating gender of actors and existing support relationships.

(A) Tie data format;

→ gives information about relations between actors; e.g., Lemo gives food and money to Za.

from	*to*	*food*	*money*
Lemo	Za	1	1
Lemo	Motso	1	1
Za	Lemo	0	1
Motso	Za	1	0
Nat	Motso	1	0
Nat	Za	0	1

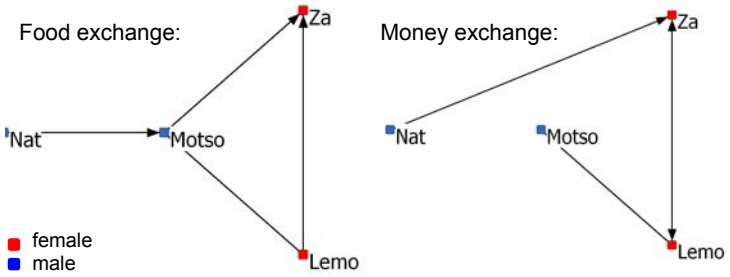
(B) Node data;

→ provides information about actors' attributes, e.g. gender.

actor	*gender*
Lemo	female
Za	female
Motso	male
Nat	male

(C) Graphs; created by by NetDraw

→ information from tie and node data are transformed into graphs.



Box 5.6.2: Transformation process from a network data list to network graphs, using a simplified fictive example of food and money exchange between four persons

In this study, tie data format includes the following relationship attributes:

- relationship role (kin, non-kin), and
- actual support relations (visits, meals, food items, small goods and money)

Attributes of actors, listed into the node data format included:

- gender (male, female), and
- level of food security (secure, insecure).

NetDraw creates network graphs according to different relationship roles between actors and different actor attributes, using different colours, shapes and sizes. The visualisation of networks allowed the interpretation of network structure, position of actors as well as the linkages between actors. In this way, conclusions regarding

network formations and usages as well as key persons within the network could be drawn.

For more detailed information about transforming and processing network data with UCINET and NetDraw, the reader is referred to BORGATTI, EVERETT and FREEMAN (1999), BORGATTI (2002) and HANNEMAN and RIDDLE (2005).

5.6.4 Merging, interrelating and interpreting the results of all data

In the final stage of analysis, the researcher merged all findings of the study in order to gain a holistic picture and a complex understanding. Findings of qualitative and quantitative data sources were compared and interrelated. The qualitative findings especially, complemented and deepened the understanding of quantitative results.

The complexity of findings and the linkages between different segments were interpreted as a whole and essential meanings were derived (CRESWELL 2009: 189). Furthermore, plausible explanations and linkages between themes and concepts were established. Emerging themes and concepts were critically challenged and alternative explanations were searched (DE VOS 2008: 338-339), not only by comparing findings with available literature but also by discussing them with South African and German experts and academics.

5.7 The role of the researcher: Overcoming social and cultural gaps

It is a common assumption that the intent of research lies in discovering the *objective truth* in events unaffected by the investigator's personal interests, believes and values. In reality, however, no research can be entirely objective because the researcher's subjectivity inevitably influences his/her work in several ways, including the choice of research questions and information sources, selection of data collection techniques, classification and interpretation of data, as well as the researchers' personal relationship with participants (THOMAS 2003: 75). FLICK (2002: 6-7) emphasises that particularly in qualitative research, the researcher is of special importance because s/he and his/her communicative competencies are the main 'instrument' of data collection and of cognition. According to FLICK:

> "The subjectivities of the researcher *and* of those being studied are part of the research process. Researchers' reflections on their actions and observations in the field, their impressions, irritations, feelings and so on, become data in their own right, forming part of the interpretation […]." (FLICK 2002: 7)

In this study, the researcher's personal values, perceptions and biases are taken into account and are critically assessed. In the following, this will be described from the researcher's point of view:

When I first came to South Africa in October 2004, I did not have any idea what to expect from my stay. Since school it has been my wish to do research in Africa and during my academic studies in Germany I had gained some theoretical knowledge on food and nutrition security in African countries, but practically I neither knew about qualitative research procedures nor the situation of South African farm workers. Being fortunate to stay in South Africa for four years, my knowledge and experiences grew and by the end I saw things more from a South African perspective than from a German one.

The most striking lesson I learnt during that period was that skin colour (still) is such an important matter in South Africa. Even though South Africa's apartheid legacy ended in 1994, racial discrimination can be perceived until today, mainly determined by underlying prejudices not only of Whites against Blacks but also Blacks against Whites and Coloureds against Blacks and so on. Being lucky to have numerous Afrikaans and African friends, I gained a lot of valuable insights and understanding of the different cultures and traditions during innumerable discussions. This knowledge obviously contributed to my understanding of the social reality of farm dwellers, particularly with regard to power relations between white farm owners and their black farm workers.

Before starting my research, I read a lot of literature and newspaper articles about the dire living and working conditions of farm workers. I must admit that I was not free of bias with regard to white South African farm owners who I mainly held responsible for

the conditions of their workers. However, interactions and conversation with farm owners and their wives in our research area revealed not only a deep rooted willingness to improve their workers' lives in several ways but it also revealed their concerns, problems and insecurities. It quickly made me realise that within their capacity and knowledge, all farmers and their wives participating in our research cared very much about their workers. Therefore, I soon buried my biases and tried to see arising matters from the perspective of both parties. Although my work will still reveal dire conditions among farm dwellers with regard to food and livelihood security, I hope that it will also illustrate the efforts undertaken by farmers to support their workers. Nevertheless, it should not be forgotten that due to past policies of apartheid a paternalistic system (see chapter 3.2.2) exists on commercial farms which still largely determines the social structure and behaviour of farmers *and* workers in various negative but also positive ways. Further, it cannot be assumed that all farmers have similar perceptions as observed in our study and there might be other farmers who misuse this old-established paternalistic system and do not mean so well with their workers.

Prior to entering the farm setting, I was very concerned if people would accept me as a young, female, European researcher. Furthermore, I was only able to communicate in English and I doubted how I could communicate with farm workers who mostly speak seTswana or Afrikaans. My first visit to the farms was like entering another world. I was shocked to see the poverty and isolation in which people live but then again I was amazed to see how people cope with the situation and how they make a living with the little they have. Likewise, I was astonished by the friendliness and openness with which people encountered me. Hence, my concerns that people would not connect or communicate with me were wiped out very quickly. Being German was not a disadvantage at all because people became curious why I am in South Africa and they also felt special having a visitor from far away. Also communicating in English was not a problem as such. Most people could understand some words of English and answered in seTswana which my field assistant translated for me. Besides, non verbal body language helped me a lot to communicate and to build a relationship of trust. Coming from a different background and having a big curiosity enabled me to notice ordinary details and encouraged people to explain their normal daily activities and experiences to me. Since the life of farm dwellers was new and very unfamiliar to me, it happened that some interviewees switched into a kind of a 'teachers mode' giving me instructions about their ordinary life (RUBIN / RUBIN 1995: 111). In this way, I gained some immensely detailed information.

In my study, I wanted to obtain both male and female perceptions with regard to food and livelihood security and social network usage. One major concern before starting my field work was how male farm dwellers would encounter a young female research team. I was not sure if my field assistant and I would be fully accepted by male participants. Due to repetitive explanations about our role as researchers and aims of our research as well as our long engagement in the field, all male farm dwellers

encountered us with great acceptance and respect. To avoid gender biases within the interviews, it was decided with the larger research team to recruit a male field assistant to conduct the structured open-ended interview with male farm workers. Nevertheless, my research assistant and I also carried out numerous structured open-ended interviews, in-depth and follow-up interviews with men and we were confident that gender relations did not affect our work and that our questions were answered in an honest and respectful way. After all, I enjoyed talking to both men and women and it gave me a much deeper understanding of gender relations occurring within the farm setting.

Since I continuously visited the same people on the same farms for four years, I became a part of this world. I did not only see the poverty and needs of the people, I also got emotionally involved with people's concerns, difficulties and problems. This made me extremely sensitive to the research area and made me realise the complexity of the reality of people's lives. Of course, people sensed my true empathy and consequently opened-up towards my field assistant and I, enabling us to gain enormous in-depth insights. However, at times I did struggle with the contrast of the two worlds which I experienced. This happened especially on days when I directly saw the harsh consequences of poverty and isolation, like injustice, health problems, babies' deaths, people having no food to eat or children not being able to go to school because of having no shoes; or when I heard about appalling events affecting our participants, like crime, rape, violence, theft or murder. I often doubted my role as a researcher and the meaning of my research because it felt like I was not able to change or improve anything for farm dwellers. Endless discussions within the research team but also with my German and South African friends helped me to find *my meaning* over and over again: Put interest into people's lives to give them a chance to speak about their experiences and make their voices heard. By being aware of my emotional involvement and due to continuous reflections and discussions with the research team, I tried not to fall into too extreme subjectivity and instead focused on the objectivity needed. Later, when working, analysing and interpreting the collected data, I was able to return into my researcher role characterised by an analytical view from an outside position.

The participants of this study gave me so much more than 'just' data for my research. They let me experience a part of their life and welcomed me with friendliness, openness and trust. Yet I wanted to give something back. Sometimes I showed them photos from my home, family and friends to share a bit of my life, too. From time to time I also took some fruits or cool drinks with me when I visited households, to show appreciation for the people's cooperation and time they made available for our research. However, these gifts were not meant to be a direct award for participation in our research and they were also given to people who were not directly involved in the interview procedures. We wanted people to participate because of their own will and not because of gifts or other benefits (see also chapter 5.8). Photos which were taken of the participants were printed out and brought to them which often resulted in great

happiness and excitement. Moreover, together with the larger research team a get-together with the participants was organised to present some selected results of my research. This event further included a photo exhibition with photos of our participants, a traditional African music performance and a braai[11].

I was very fortunate to be a part of a team of excellent and experienced researchers who not only introduced me to the research context and prepared me for the field work but also gave me the necessary sociological and anthropological background to understand the diverse aspects of farm dwellers' lives. In regular research meetings, we discussed the research progress, including problems and difficulties experienced during field work, data analysis and interpretation. These meetings further enabled me to continuously reflect on my own subjectivity, concerns, experiences and feelings.

[11] Braai is the South African word for barbeque.

5.8 Ethical considerations

Research ethics oblige the researcher to be open and honest towards the participants about the intended use of the research as well as to protect them against any harm (RUBIN / RUBIN 1995: 94, CRESWELL 2009: 87). In this study, a number of ethical considerations were followed before, during and after the field work to avoid any harm to our participants.

Since most farm dwellers live on the farm premises, we gained permission from the farm owners before entering the field (see detailed description in chapter 5.3.1). Permission was also obtained to conduct interviews with male farm workers during working hours. Afterwards, farm dwellers were informed that permission was given by the farm owner to conduct this research. By doing so, we ensured farm dwellers that they will not have any disadvantages or get into trouble when participating in the study.

Before each interview, the researcher informed the participant about the purpose of the research, the reason why s/he was selected, the length of the interview, that participation is voluntary and can be withdrawn at any time, and that confidentiality is guaranteed. The researcher decided to obtain informed consent in an oral form because most farm dwellers are illiterate and might have felt threatened with signing a written consent form with contents they cannot understand. Only when oral consent was obtained, the interview was conducted. The interviewee's privacy was respected and information was never pushed. When the research team felt discomfort or unease from the interviewee's side, the topic was either very sensitively addressed or it was switched to another topic. Information obtained from interviewees was not used for any other purpose than for this research.

From the outset it was made clear that participation in our research would not be rewarded with money or other goods. Since most farm dwellers live in constrained conditions, we did not want their participation to be based on the motivation to gain financial or material advantages. In the beginning, the research team was asked several times for money, food, clothes or shoes. These requests were politely rejected and the team explained that they will not be able to help or change the situation directly or in the short term. It was further explained that the aim of this research was to inform policy makers and other institutions about farm dwellers' life experiences and needs to enable them to plan programmes and initiatives to improve the situation. However, no promises could be made regarding any future outcomes of the research.

To protect the anonymity of the farm owners and farm dwellers, pseudonyms and fictive names are used for participants and farm areas, respectively.

5.9 Trustworthiness: Validation of qualitative research

This study follows a mixed methods design whereby the qualitative paradigm frames the study. Therefore, validation of this study follows the rules which are common in qualitative research. Criteria to demonstrate validity of qualitative research is provided by LINCOLN and GUBA (1985: 289-331) and BABBIE and MOUTON (2001: 276-278). They introduced the notion of trustworthiness which entails four constructs: Credibility, transferability, dependability and confirmability. Several strategies are available to accomplish these four constructs and to achieve the trustworthiness of qualitative data. Table 5.9.1 gives an overview of strategies employed in this study, according to their validity criteria.

Table 5.9.1: Overview of strategies employed according to validity criteria (based on LINCOLN / GUBA 1985: 289-331, BABBIE / MOUTON 2001: 276-278)

Validity criteria	Employed strategies
Credibility	- Prolonged engagement in the field - Persistent observation - Triangulation of methods and sources - Referential adequacy - Member checks - Peer reviews
Transferability	- In-depth descriptions of methods, research setting, data, findings and interpretation - Purposive sampling
Dependability	- Inquiry audit of critical events during research process by supervisors, research team members and experts
Confirmability	- Documentation during research preparation, data collection and management, categorising and analysing processes - Audit of conclusions, interpretations and recommendations by supervisors, research team members and experts - Continuous reflection on researcher's role, her biases and perceptions - Cross-data checks and comparison

In the following, a detailed description of these strategies employed in this study is provided (based LINCOLN / GUBA 1985: 289-331, BABBIE / MOUTON 2001: 276-278):

Strategies to accomplish credibility

Prolonged engagement was accomplished through the researcher's four years of research in the field. During this time, *persistent observation* was carried out whereby

findings and their interpretations were constantly pursued in different ways, incorporating ongoing reflection and rethinking of interpretations. *Triangulation* is represented by using different research methods for data collection and analysis as well as collecting different viewpoints on the topic through interviews not only with farm dwellers but also with key-informants (see chapter 5.5 and 5.6). *Referential adequacy* was ensured by tape recordings, interview notes as well as the documentation of observations in a field book (see chapter 5.5). *Member checks* included clarification and reflection of obtained information immediately during the interview or later in follow-up visits (see chapter 5.5). Weekly *peer review* meetings within a team of experienced African and German researchers and external peer academics from the disciplines of Nutrition Sciences, Social Anthropology and Sociology ensured continuous supervision and reflection on the research process and experiences from the field.

Strategies to accomplish transferability

According to BABBIE and MOUTON (2001: 277), transferability refers to the extent to which the findings can be applied in other contexts. In qualitative research, all findings are defined by the specific context in which they occur and thus can hardly be generalised. Therefore, the qualitative researcher does not maintain or claim that knowledge gained from one context will necessarily have relevance for other contexts. Yet, the demonstration of the applicability of the findings to another context lies on those who wish to apply it (BABBIE and MOUTON 2001: 277). In this study, *in-depth descriptions* of the employed methodologies and the research setting as well as detailed descriptions of the data, findings and interpretations, allow the reader to judge about transferability. Furthermore, in-depth data was gained in *purposively selected* households (see chapter 5.4) to maximise the range of specific information that can be obtained from and about the context.

Strategies to accomplish dependability

The aim of proving dependability is to provide evidence that findings would be similar if the research were to be repeated with the same or similar respondents in the same or similar context (BABBIE / MOUTON 2001: 278). The *inquiry audit* involved the researcher's supervisors, colleagues from the research team as well as other experts in the field who reviewed and examined critical events during the research process (e.g. questionnaire design, problems during data collection or analysis, categorisation or interpretation of data).

Strategies to accomplish confirmability

Confirmability is the extent to which the findings are the result of inquiry and not of the biases of the researcher (BABBIE / MOUTON 2001: 278). Extensive *documentation* during research preparation, data collection and management, as well as during

categorising and analysing processes enabled traceability of the research process and thus ensured confirmability. Moreover, the researcher's supervisors as well as colleagues from the research team *audited* whether the conclusions, interpretations and recommendations could be traced to their sources and if they were supported by the inquiry. In addition, the research findings were presented and discussed at research meetings and workshops with South African peer experts and at national and international conferences. *Continuous reflection* on the researcher's role, her biases and perceptions were carried out to ensure the necessary objectivity and thus confirmability of this research (see chapter 5.7). Since this study entailed both qualitative and quantitative data and findings, *cross-data checks and comparisons* were employed to ensure the accuracy of findings and their interpretation. In this respect, interpretative qualitative findings were interrelated and complemented with quantitative findings from descriptive statistics and network analysis, and vice versa (see chapter 5.6).

5.10 Limitations of the study

The two main general weaknesses of qualitative research are the researcher's subjectivity involved in the process and that findings can hardly be generalised (RUBIN / BABBIE 2005: 462). To limit the researcher's subjectivity in this study, consistent awareness and reflections on biases and perceptions were performed (see chapter 5.7) and different strategies to achieve trustworthiness were employed (see chapter 5.9). The mixed methods design enabled a comprehensive and unbiased understanding of the research context through complementing qualitative and quantitative data and findings.

The intent of this study lies in the in-depth description and understanding of food and livelihood security of South African farm dwellers and how they use their personal networks to achieve food and livelihood security. Thus, findings are difficult to generalise to other settings in South Africa. WALDMAN (1994: 27) stresses in her qualitative research on farms that findings of the local situation are specific to the investigated farms, as other settings have differences in history, geography and socio-economic circumstances. However, broad issues will probably be applicable to other farm dwellers living and working on South African commercial farms, even though details will be different. It also might be possible to apply the broader theory regarding network formation and usage to poor and marginalised people living elsewhere.

It further needs to be considered that the research team worked on those farms where farm owners gave their permission. On other farms where working and living conditions are expected to be worse, farm owners would probably not have granted permission to conduct research, as was experienced during the selection of farms in the planning of the larger research project.

Visiting farm dwellers at home was of advantage not only because of obtaining a broader picture of the setting through observations, but also because of having a relaxed atmosphere with interviewees being in a familiar environment. In some cases, tension was felt when visitors or other family members joined the interview and interviewees could not talk openly anymore. In these cases, sensitive issues where not followed up further and the interview was shifted to general questions (not necessarily in accordance with the interview structure), also involving the visitor or family member. Often, these 'interviews' ended in very informative chats which revealed unexpected interesting matters and general experiences of farm dwellers. Further, when partners or visitors arrived, it often happened that valuable insights were gained into intra-household dynamics as well as on network actors and their roles and relationship to the interviewee.

A limitation considered in this study was that most male farm workers could only be interviewed during working hours because they were rarely available in their time off to

participate in this study. Even though it was explained several times that their participation during working hours was allowed by the farm owner, the field assistant often reported to the researcher that he perceived the time pressure and unease of the interviewees. Besides, a relaxed atmosphere was hard to create in the working environment and cannot be compared with the comfort of visiting interviewees at home. However, it was of utmost importance to include the voice of male farm workers not only because they are the main income earners in most farm worker households, but especially because male farm workers strongly expressed their interest to participate in this research.

In this study, the researcher mainly collected the data herself, since qualitative data collection methods require deep understanding of the research context and a flexible design throughout the process in accordance with the research objectives. Nevertheless, to avoid gender biases, it was decided to recruit a male field assistant who conducted the structured open-ended interviews with male farm workers alone after he received extensive training on qualitative interviewing by the researcher and members from the larger research project. However, during data collection, the researcher did not have any control over the collection procedure. A major constraint faced was that issues interesting for the researcher were not always probed and followed-up deeply enough by the male field assistant. Yet, arising matters were followed-up by the researcher herself through follow-up or informal interviews with male workers (see chapter 5.5.1). Another constraint was that the dynamics between the male interviewer and the interviewees could not be determined personally. The fact that the male field assistant was a well-educated, married man who works for the university might have put some farm workers in an uncomfortable position. In some cases, it seemed like male interviewees distorted the truth a bit to make their living circumstances look better than reality. These cases have been discussed with the field assistant, evaluating the dynamics during the interview as well as comparing the information received with other data sources.

Moreover, it appeared that men generally only gave short answers during the interviews. In-depth descriptions, as were gained from women, were rather seldom. One reason could be that the interview techniques of the male field assistant differed from the researcher, even though an extensive training was provided. Another reason might have been the perceived time pressure and unrest of farm workers who were interviewed during working hours as mentioned earlier. Nonetheless, it needs to be stressed that interviews with male farm workers done by the researcher herself and during leisure time, provided in most cases only short answers, too.

As stated earlier, the role of the researcher being an outsider within the field researched proved to have far more advantages than disadvantages (see chapter 5.7). Nevertheless, without speaking the local language, the researcher sometimes

experienced constraints in obtaining in-depth information on attitudes and perceptions of interviewees. However, since interviews were mostly tape-recorded and later translated verbatim by research assistants, this missing information could be complemented and issues arising from these transcripts were followed-up during the next visits to interviewees. Furthermore, the very good relationship and team work with the research assistant enabled the researcher to gain in-depth information through informative conversations during and after the farm visits.

For the research team, it was very important not to disturb the participants' daily routines with their research activities. Very often planned research activities could not be carried out because participants were difficult to reach or had only limited time. Women especially were often busy with their household chores or with visitors coming by. Interview appointments could often not be met because women spontaneously got a piece job or transport to town to buy their groceries. Thus, data collection procedures were very time consuming, with many visits resulting in no interviews being conducted. However, on these occasions observations were performed which provided many insights into the daily routine of farm dwellers.

As in any research involving interviews with people, there is always the risk that people distort or do not tell the absolute truth during the interview. As stated earlier, in the beginning of the research in October 2004, several farm dwellers asked the research team for money, food or other goods. This might have been because they did not really know the role and intent of a researcher or they confused the research team with social workers who used to come frequently to the research area. By giving false or distorted information to the research team, some people might have hoped to gain certain advantages or benefits. Since the researcher continuously visited the farm areas during four years, farm dwellers became used to the researcher's presence and understood their role and intention. Besides, interview data was rechecked with other data sources gained throughout the research process and therefore, sense could be made of data which seemed not completely clear. Including all these activities, the risk of gaining or evaluating false information was widely mitigated.

6 DESCRPTION OF THE RESEARCH SETTING

This chapter provides an insight into the research setting. It will first depict the structural changes which occurred during the four years of field work from 2004-2008, due to a farm sale and a land restitution process. Thereafter, infrastructural characteristics of the farm area will be described. The chapter will close with a photo documentation, offering some visual impressions of the life in the farm area.

6.1 Implications of land reform in the farm area: Structural changes over time

During the research period, several changes regarding ownership occurred in Koppiesplaas and Ouplaas as illustrated in figure 6.1.1.

<table>
<tr><td></td><td colspan="5">Structural changes over time</td></tr>
<tr><td>Place</td><td>1973</td><td>1990</td><td>Sept 2006</td><td>Nov 2006</td><td>Since Nov 2006</td></tr>
<tr><td>Ouplaas</td><td>Farmer OP takes over the farm of his father</td><td></td><td rowspan="2">Farmer KP sells Koppiesplaas to farmer OP</td><td>Ouplaas is assigned to 2 claimant communities, Farmer OP stays manager & shareholder</td><td rowspan="2">Farmer OP cultivates both farms as manager of Ouplaas and owner of Koppies-plaas</td></tr>
<tr><td>Koppies-plaas</td><td></td><td>Farmer KP takes over the farm of his father</td><td></td></tr>
</table>

Figure 6.1.1: Structural changes in Ouplaas and Koppiesplaas

Koppiesplaas, owned by farmer KP since 1990, was bought by the owner of Ouplaas (here called Farmer OP) in September 2006. Workers and their families were asked by the new owner to leave the premises. Most workers formerly employed in Koppiesplaas were offered a work contract and accommodation in Ouplaas. However, not all workers decided to take this offer and searched for work on other farms. Pensioners and unemployed people moved to the informal settlement. By October 2008, when the researcher last visited the farm, six out of twelve households were still living in Koppiesplaas.

In November 2006, farmer OP sold Ouplaas which he had owned since 1973, to the state because of a land restitution claim. The farm was then signed over to two black communities. However, farmer OP continues to farm in Ouplaas as managing director and shareholder in a joint venture between the two communities, the food industry and the government. Both farms, Ouplaas and Koppiesplaas, are still managed by the same farmer.

6.2 Description of research setting and infrastructural characteristics

For a better overview of the research area, figure 6.2.1 shows a sketched map of the farm settings where research was conducted. To ensure confidentiality the map does neither display the boundaries of the farm area nor other farm areas located on the periphery. The illustration is also not drawn to scale, but the purpose is to illustrate the location of the main road, roads to the farms, shops and taverns, a school and residents' houses. The map further illustrates the different housing areas and distances between them. All farms are situated within a radius of 15 kilometres.

As can be seen in figure 6.2.1**, Ouplaas** is situated close to the main road and is characterised by two housing areas for farm workers and their families. The farm owner's house is 0.7 to 1.5 kilometres from the farm workers' housing areas. The **informal settlement** is situated within the farm area of Ouplaas. It can be clearly distinguished from the other settings because of its high density of dwellings and its unorganised structure without proper streets or paths. Within the area of Ouplaas and the informal settlement there is a shop, a tavern and a church. A mobile clinic comes two to four times per month, having its access point next to the shop. Governmental or non-governmental campaigns usually take place in front of the shop. At the main road junction, taxis or lifts to towns can be caught mainly on weekends. Compared to the surrounding areas, this farm area can be regarded as the most populated and liveliest with a relatively good infrastructure. **Koppiesplaas** is situated about seven kilometres from Ouplaas and about three kilometres from the main road. The farm owner's house is 0.6 kilometre from the workers' houses. Residents from Koppiesplaas have to walk approximately seven kilometres to the next shop. **Vlakteplaas** is located 15 kilometres and seven kilometres from Ouplaas and Koppiesplaas, respectively. It is five kilometres from the main road and the closest shop is at a distance of 6.5 kilometres. Farm workers' houses are 0.7 kilometre from the farm owner's house. Further, a small primary farm school is situated within this area.

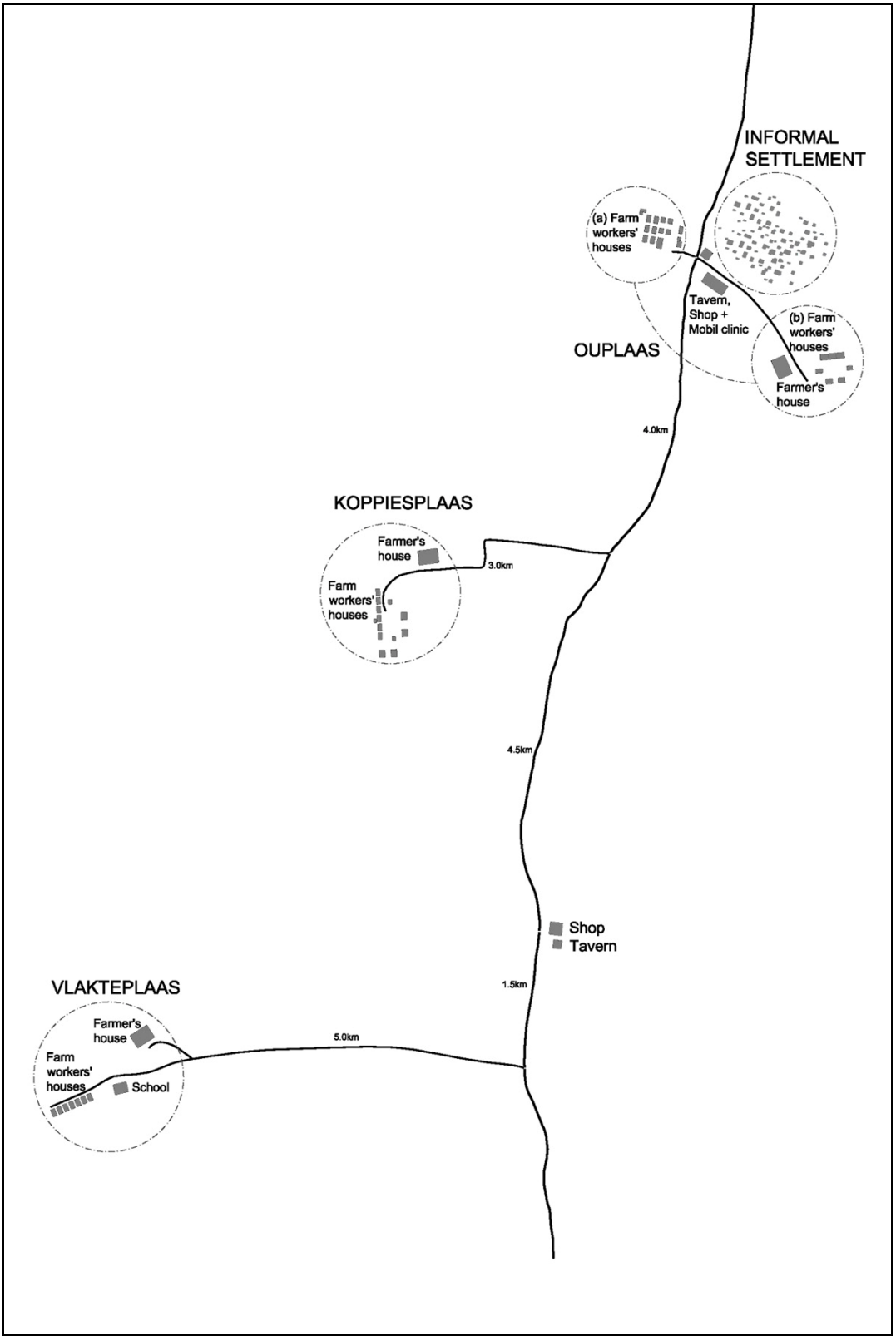


Figure 6.2.1: Map of the research setting

Distances from the farm settings to the mobile health service, schools, closest grocery stores, the main road and the closest town are summarised in table 6.2.1. The table further provides an overview of infrastructural and farm specific characteristics which will be described in detail below:

Farm characteristics

Ouplaas, Koppiesplaas and Vlakteplaas are commercial farms performing mixed crop and cattle farming. Ouplaas is the biggest farm with an area of 2900 hectares, followed by Vlakteplaas with 2000 hectares. Koppiesplaas is the smallest farm covering 160 hectares.

In the past, Ouplaas and Koppiesplaas were assigned from fathers to their sons in 1973 and 1990, respectively. Hence, both farms look back on a long farming tradition. After the land redistribution and sale in 2006, both farms are managed by the same farmer (see chapter 6.1). Consequently, the same workforce as well as the same types of crops and livestock are found on both farms Ouplaas and Koppiesplaas. Vlakteplaas has been operating since 1999.

Infrastructure

In Ouplaas and Koppiesplaas reside 21 and six households, respectively, living mostly in brick houses provided by the farmer and usually linked to employment. Other dwellings such as stone houses, traditional mud houses and shacks are found, too. Besides farm workers and their families, retired farm workers, or close relatives of deceased farm workers are allowed to stay on the premises as well. Seven households live in Vlakteplaas in brick houses provided by the farm owner and linked to employment.

The informal settlement has an estimated size of four hectares with approximately 60 to 100 households residing in this area. Inhabitants are mostly seasonal farm workers but also formally employed farm workers as well as pensioners, unemployed, informally employed and self-employed persons. Houses are self-made dwellings from scrap material, mostly corrugated iron and wood.

Electricity is only available in Ouplaas and Vlakteplaas. In Koppiesplaas and the informal settlement alternative energy sources are used, such as firewood and paraffin for cooking and car batteries to run TVs and radios, if available.

Table 6.2.1: Characteristics of the four research settings

	Ouplaas	Koppiesplaas	Vlakteplaas	Inf. Settlement
Setting	Commercial farms			Informal settlement
Size of area	2900 ha	160 ha	2000 ha	approx. 4 ha
FARM CHARACTERISTICS				
Farm beginnings	Previous owner since 1973 New owners since 2006	Previous owner since 1990 New owner since 2006	1999	n/a
Ownership	2 claimant communities	1 farm owner (former owner of A1)	1 farm owner	
Management	former farm owner	farm owner	farm owner	
Workforce*				
Full-time	32 men, 3 women		7 men, 3 women	
Part-time	15 men, 15 women		-	
Seasonal	100 men, 180 women		200 men & women	
Crops	maize, peas, potatoes, sunflower, sorghum		maize, peas	
Livestock	cattle		cattle, sheep, chicken	
INFRASTRUCTURE				
Number of residing households	21	6 (12)[#]	6	60-100 (estimate)
Inhabitants	farm workers and their families, retired farm workers, family of deceased farm workers		farm workers and their families	farm workers, pensioners, unemployed, other dwellers
Housing	brick houses provided by farm owner usually linked to employment, also other dwellings for former workers		brick houses provided by farm owner linked to employment	Impoverished dwellings made from scrap materials
Electricity	yes (since 2002)	no	yes (since 2003)	No
Rent (incl. electricity costs)	ZAR 55	-	ZAR 30	-
Access to water	communal tap (borehole)	communal tap (borehole)	communal tap (water tank)	water from nearby stream
DISTANCES (km)				
Mobile health service	0.2 - 1.4	7.0	15.0	0.2 - 1.0
Closest school (school bus)	4.0	8.0	0.1	4.0
Closest grocery store	0.2 - 1.4	7.0	6.5	0.2 - 1.0
Main road	0.2 - 1.4	3.0	5.0	0.2 - 1.0
Closest town	30.0	38.0	40.0	30.0

* Data from 2006. Number altered throughout time but stayed within the same range.

[#] From 2004 to 2006, 12 households were recorded to reside on the farm. After the farm sale and new ownership in September 2006, many households left the farm. When last visited in October 2008, six households were still living on the farm.

Access to drinking water is available from communal taps on all three farms. In the informal settlement a nearby stream provides water to the community, but the water is not safe. In the past, the farm owner of Ouplaas provided water tanks to the informal settlement. He also allowed dwellers of the informal settlement to get water from the communal tap located in the farm workers' housing area. After the land restitution in 2006, it is not clear if the people from the informal settlement still have access to these water sources.

No sanitation facilities are installed in any of the farm dwellers' houses. In Ouplaas and Koppiesplaas, pit latrines were built by 63.0 percent of farm dwellers and are shared among three households on average. In Vlakteplaas the farm owner provided one pit latrine which is shared by seven households (HEUMANN 2006: 58). In the informal settlement the Department of Social Development installed pit latrines in 2006. As no one was assigned to take care of and clean them, they are no longer suitable for use.

Distances to urban areas and means of transport

The distance to the closest town is 30 to 40 kilometres. Since most farm dwellers do not possess a car (only three households were observed to own a car), they rely on other means of transport. Public transport in the farm area is only available at the main road in the form of private mini buses, known as taxies. Farm dwellers from Koppiesplaas and Vlakteplaas have to walk three to five kilometres to the main road to catch a taxi. Taxies operate mostly on weekends and do not run according to schedules, thus, being unreliable and irregular. An alternative to taxies is hitch hiking which is as costly as taking a taxi. Both car and taxi drivers charge a fare between 70-130 ZAR. Most farm owners willingly provide transport to farm dwellers when they have appointments in nearby towns. Farm owners do not charge any fare when providing transport.

Grocery stores in the farm area

There are two small grocery stores situated within the research area. Close to Ouplaas and the informal settlement a grocery store, owned by an Indian man, is within a short walking distance of 0.2 to 1.4 kilometres (see table 6.2.1). The second and smaller grocery store, owned by a farm owner and run by his wife, is situated at the main road between Koppiesplaas and Vlakteplaas. Farm dwellers living on these two farms have to walk six to seven kilometres to reach the store.

Compared to supermarkets in urban areas, these stores offer a lower variety of foods and prices are on average 45.1 percent higher than in urban areas (BATEL 2006).

Alcohol is not sold at the two stores but in both cases, a tavern is situated in close proximity (see figure 6.2.1, p. 115). These taverns are very popular meeting points for farm dwellers on weekends.

Access to health care services

Because of the lack of public transport, hospitals and doctors in towns are difficult to reach for people living on farms. Therefore, the Department of Health of the North West Province runs a mobile health care system to provide basic health services to rural and farm areas. In Ouplaas, a mobile clinic normally visits weekly. To attend this clinic in Ouplaas, residents from Koppiesplaas and Vlakteplaas have to walk seven and 15 kilometres, respectively (see table 6.2.1).

Due to several organisational, mechanical and personnel problems within the Department of Health, the mobile clinic does not visit as regularly as intended[12]. At one time the mobile clinic did not visit the farm area for two months.

School situation

In Vlakteplaas a primary school is situated within a short distance of 100 metres from farm workers' houses. Children from Ouplaas and Koppiesplaas attend schools situated at a distance of four to eight kilometres. Since the beginning of 2007, a school bus stopping along the main road provides transport.

Within the farm surroundings, only primary school education is provided up to grade seven. For higher education facilities, children have to attend schools in urban areas but they are hard to reach because of a lack of regular and affordable transport. Only if relatives in town are willing to take care of children can farm dwellers send their children to attend higher education.

About 80 pupils from the surrounding farms attend the primary school in Vlakteplaas. In September 2005, the school was extended from two to four classrooms through the initiative of researchers from the larger research project and the FLAGH programme, in collaboration with the farm owner of Vlakteplaas. Since then, three teachers hold lessons for all pupils in three classrooms. Initially, it was intended to employ a forth teacher but there is a shortage of teachers who are willing to teach in farm schools because of low salaries, long travel distances and a difficult teaching environment[13]. The latter is mainly characterised by overcrowded classes and a lack of teaching materials. Books and other media like TV, video and computers are missing which could help pupils to become more familiar with modern technology. The school's poor quality of education and overcrowded classes are expressed in the following comment by the principal of the school:

> "There are so many things [that children need the most], things like recreation facilities. ESKOM [the electricity company] must buy a TV/Video, so that children can see what a town looks like, they don't know what it is.."

---

[12] Qualitative interview with a nurse working at the mobile clinic, 19 October 2007.

[13] Qualitative interview with the principal of the primary school in Vlakteplaas, 12 September 2007.

Irregular school attendance of pupils is another problem faced by the farm school. The principal of the school sees poor parental care as the main reason for the absence of pupils. This is expressed in the following quote:

> "On Mondays, they often don't come to school. Their parents were drunk and did not wash their school clothes. If they are in school on Monday, they are still sleeping, they are far away. On weekends, the children go to the taverns with their parents. There is nothing for them to do."

Parents, however, blame their children's irregular attendance on the long distances to the schools and on too high school fees, which was ZAR 30 per month in Vlakteplaas in 2008.

In Ouplaas, since 2006 the church building in the farm workers' housing area has served as a crèche for approximately 20 children during the week. In Vlakteplaas a small shack was built in 2008, accommodating approximately 10 children. The availability of crèches gives women more time to engage in seasonal work and earn an income.

6.3 Photo documentation

The following photo documentation gives the reader some visual impressions of life on the farms. Photo one shows a warning sign at the entrance gate of one farm. In three languages, it says: “WARNING. ACCESS PROHIBITED. Any person entering this area without proper authority exposes himself to danger and prosecution!”

Photos two to nine illustrate the farm dwellers’ housing situation. It can be seen that there are different types of dwellings. Most farm worker houses are brick houses. On one farm three traditional mud houses (photo 4) exist and in the informal settlement the majority of dwellings are shacks built with corrugated iron (photo 5). The interior of the houses can look very different (photo 6 to 7), from well equipped to almost bare. Photo eight shows a pit latrine shared by several households on the farm and photo nine illustrates a typical kitchen which is a little shack built next to the house.

Photos ten to 16 show day-to-day activities of farm dwellers, such as a child playing, the sun-drying of meat and a women fetching water. Moreover, they show two children eating common dishes, such as *pap* (maize meal porridge) with *morogo* (green leafy vegetables) (photo 13) and *pap* with fried chicken feet (photo 14). Photos 15 and 16 show women preparing traditional beer and *vetkoek* (deep-fried dumplings), respectively.

Photos 17 to 19 illustrate shopping facilities in the farm area, such as a relatively large tuck shop in the informal settlement, a monthly market on pension day, and a grocery shop.

Photos 20 and 21 show a primary school on one of the farms and photos 22 and 23 display male and female workers during the potato harvest. The photo documentation ends with a picture of a deserted farm worker housing area (photo 24) after farm dwellers were evicted due to the sale of the farm.

Photo 1: Warning sign at the farm gate

Photo 2: Farm worker house

Photo 3:
Cattle grazing in farm worker housing area

Photo 4: Traditional mud house

Photo 5: Shack in the informal settlement

Photo 6: Interior of farm worker house (1)

Photo 7: Interior of farm worker house (2)

Photo 8: Pit latrine in housing area

Photo 9: Kitchen outside of the house

Photo 10: Child playing

Photo 11: Sun-drying meat for preservation

Photo 12: Fetching water

Photo 13: Pap and morogo for lunch

Photo 14: Pap and chicken feet for lunch

Photo 15: Preparing traditional beer

Photo 16: Cooking vetkoek

Photo 17: Tuck stop

Photo 18: Market during pension day

Photo 19: Grocery store in the farm area

Photo 20: Farm school

Photo 21: Class room in farm school

Photo 22:
Male farm workers during potato harvest

Photo 23:
Women seasonal workers during potato harvest

Photo 24: Farm worker houses after eviction

7 RESULTS

In the following section, the results of the various qualitative and quantitative analyses of livelihoods, food security and social networks will be outlined. In the beginning a description of socio-demographic and household characteristics of farm dwellers will be given, followed by a detailed portrayal of their livelihood security. Then, farm dwellers' vulnerability in terms of livelihood constraints and shocks as well as their household food security will be examined. Since gender relations play an important role within livelihoods and food security, the subsequent chapter will highlight intra-household dynamics and gender relations. Thereafter, an extensive outline of farm dwellers' social networks will be provided, revealing their role within everyday life and as a social support system. The results chapter will end with an overview of other social capital resources prevalent in the farm area under investigation.

7.1 Socio-demographic and household characteristics of interviewed farm dwellers

Within this chapter, the socio-demographic and household characteristics of 69 farm dwellers living in 49 households will be illustrated, including several socio-demographic indicators of farm dwellers, and a description of existing household categories and their specific characteristics.

7.1.1 Socio-demographic profile of interviewed farm dwellers

Table 7.1.1 provides an overview on basic socio-demographic characteristics of 69 farm dwellers who participated in this study, including the indicators place of birth, age, qualification, marital status and length of stay on farm.

Table 7.1.1: Overview of socio-demographic characteristics of interviewees

	Men (n=37)		Women (n=32)		Total sample (n=69)	
Distance to place of birth*	N	%	n	%	n	**%**
1-50 km	24	64.9	16	51.7	40	**58.9**
51-100 km	4	10.8	3	9.7	7	**10.3**
>100 km	9	24.3	12	38.7	21	**30.9**
	$\chi^2(4)=1.96$; p=0.743					
Age (in years)						
mean	43.7		44.7		**44.1**	
Std.dev.	14.6		16.7		**15.5**	
Min; max	24; 79		22; 76		**22; 79**	
	U=582.50; p=0.909					
Education level (in years)						
Mean	3.8		4.0		**3.8**	
Std.dev.	3.7		3.9		**3.7**	
Min; max	0; 11		0;12		**0; 12**	
	U=575.00; p=0.832					
Marital status	N	%	n	%	n	**%**
in a conjugal or marital relationship	32	88.5	24	75.0	56	**81.2**
widowed	0	0.0	7	21.9	7	**10.1**
single	5	13.5	1	3.1	6	**8.7**
	$\chi^2(2)=10.50$; p=0.005					
Length of stay on farm (in years)*						
Mean	11.2		11.2		**11.2**	
Std.dev.	9.7		7.8		**8.8**	
Min; max	1; 35		1; 25		**1; 35**	
	U=545.50; p=0.730					

* In the cases of 'distance to place of birth' and 'length of stay on farm', one woman did not respond in each case. Thus, the study sample within these cases is n=31 and n=68 for women and for the total study sample, respectively.

In the following, the socio-demographic indicators are described in detail:

Place of birth

As shown in table 7.1.1, the majority of interviewees (58.9%) were born in a narrow radius of less then 50 kilometres from the place where they presently live. Only 10.3 percent of the interviewees were born within a distance of 51 to 100 kilometres and almost one third of the interviewees (30.9%) were born in a place more than 100 kilometres away. Even though not statistically significant ($\chi^2(4)=1.96$; p=0.743), there are slight gender differences. More men (64.9%) were born within a small radius compared to 51.7 percent of women. In contrast, more women (38.7%) come from an area which is further away compared to 24.3 percent men.

Figure 7.1.1 shows the distribution of interviewees' places of birth according to gender. It becomes clear that the majority of male and female farm residents were born on a commercial farm (62.2% and 67.7%, respectively), followed by 21.6 percent of men and 25.8 percent of women born in urban areas. Only a few interviewees were born in rural areas or abroad. Gender differences do not exist ($\chi^2(3)=2.78$; $p=0.426$). However, only male interviewees (n=3) reported that they were born in foreign countries, including Malawi, Mozambique and Zambia. The two men from Malawi and Zambia have been in South Africa for more than 20 years and live together with their wives in the informal settlement. The man from Mozambique migrated to South Africa to find work. He lives in the informal settlement too, but his wife and family still live in Mozambique. None of the interviewed women was born outside of South Africa. Also during qualitative data collection procedures (field observations and informal conversational interviews), women being born in foreign countries did not occur in the farm area.

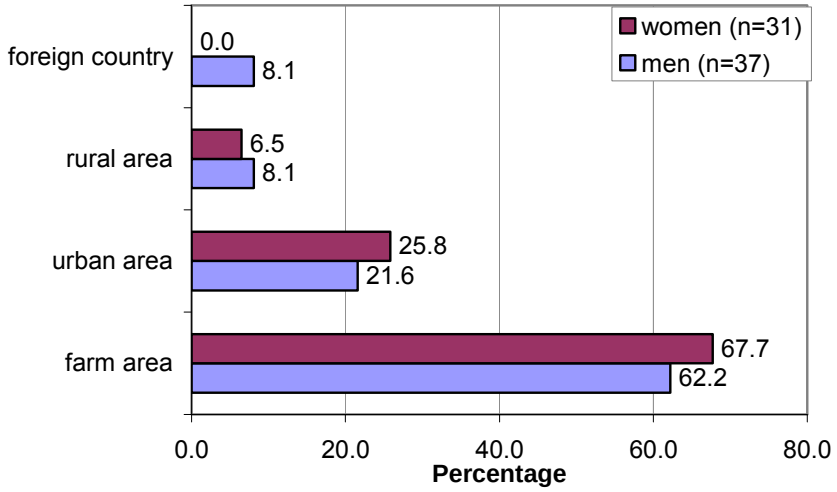


Figure 7.1.1: Place of birth according to gender (in %)

Age

The average age of all interviewed farm residents (n=69) is 44.2 years (see table 7.1.1, p. 127), with the youngest interviewee being 22 years old and the oldest 79 years. The average age of women and men are nearly equal, 44.7 years and 43.7 years, respectively.

Figure 7.1.2 illustrates the distribution of different age groups. Half of the interviewees are relatively young with an age below 40 years (50.7%) and 18.8 percent of interviewees are older than 60 years. All of them are pensioners who no longer work on farms. Of these pensioners, six live in the informal settlement, five in Ouplaas and two in Koppiesplaas.

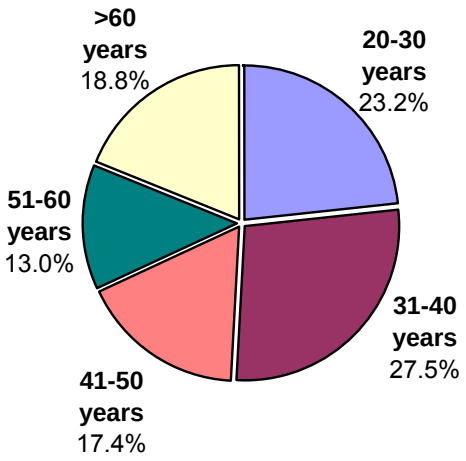


Figure 7.1.2: Distribution of interviewed farm dwellers according to age groups (n=69)

Educational level

The educational level among all interviewed farm dwellers (n=69) is, with an average of 3.9 years, very low (see table 7.1.1, p. 128). Gender differences hardly exist, with women having on average 4.0 years and men 3.8 years of schooling.

Figure 7.1.3 illustrates the school graduation rates of the total study sample. Almost foutry percent of interviewees have no education at all and can be regarded as illiterate. While a total of 23.2 percent of interviewees had some years of education, only 14.5 percent finished primary school. Moreover, only 21.7 percent of interviewees experienced some years of higher education and only one female farm dweller (1.4%) graduated from high school.

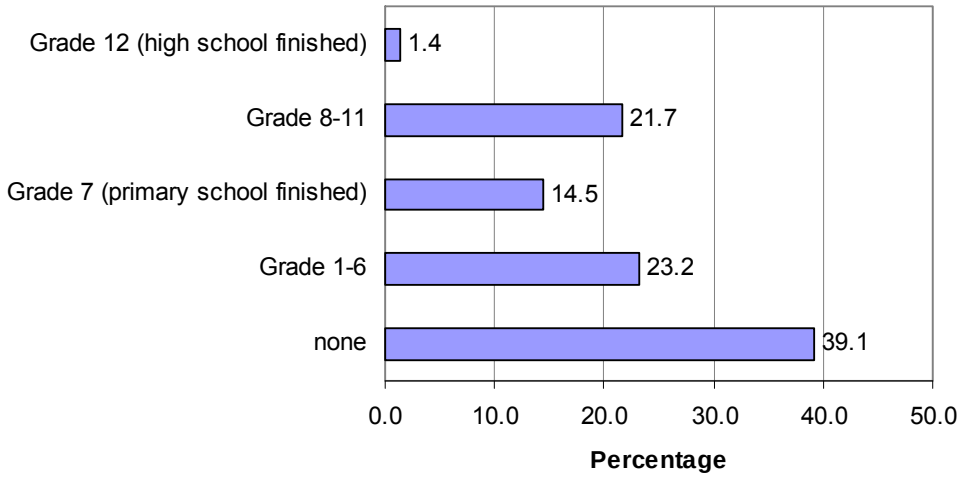


Figure 7.1.3: School graduation rates of interviewed farm dwellers (n=69) (in %)

Marital status

The majority of interviewed farm dwellers (81.2%) are in a conjugal or marital relationship, 10.1 percent are widowed and 8.7 percent are single (see table 7.1.1, p. 127). Partnerships can be distinguished between short- and long-term conjugal relationships (without traditional or civil ceremony) and marital relationships (married by traditional and/or civil law). However, perceptions regarding the categorisation of partnerships differ between genders. The type and length of relationships will be further discussed in chapter 7.5.1.

It comes to the fore in table 7.1.1 (p. 127) that only women have been widowed (21.9%) while none of the men in the study sample have. Moreover, five men (13.5%) report to be single, compared to one woman (3.1%).

Length of stay in the farm area

Table 7.1.1 (p. 127) shows that farm dwellers (n=68) reside for an average 11.2 years in the area. The average length of stay of men and women is equal. The length of stay, however, varies between the different farm settings, as can be seen in figure 7.1.4. Most farm dwellers from the informal settlement (50.0%) and in Vlakteplaas (58.3%) have moved there recently, between one and five years ago. Short term stays can indicate a high fluctuation in these areas. Most people living in the informal settlement are unemployed people, single women and pensioners who can easily settle there because of unclear land ownerships and tenure regulations. Except for pensioners, people most likely chose to live temporarily in the informal settlement until a new job or a new housing situation has been found. Furthermore, farm workers of Ouplaas also reside in the informal settlement, either temporarily waiting for a provision of a house by the farm owner, or permanently so as to enjoy possessing their own dwellings and deciding independently from the farm owner about the size of the house and people living with them. The short term stays of farm dwellers in Vlakteplaas can be explained by the rather young age of the farm (operating since 1999) and the fact that retired farm workers and widows are not allowed to reside on the farm. Short term stays might also indicate discontentment with working and/or living conditions.

Conversely, most farm dwellers of Ouplaas (53.1%) and Koppiesplaas (58.3%) have lived there for more than ten years. This can be explained by the history of both farms (see chapter 6.2). When the sons took over the farms of their fathers (1973 in Ouplaas and 1990 in Koppiesplaas), farm workers were taken over, too. Moreover, on both farms retired farm workers and widows of farm workers are permitted to stay.

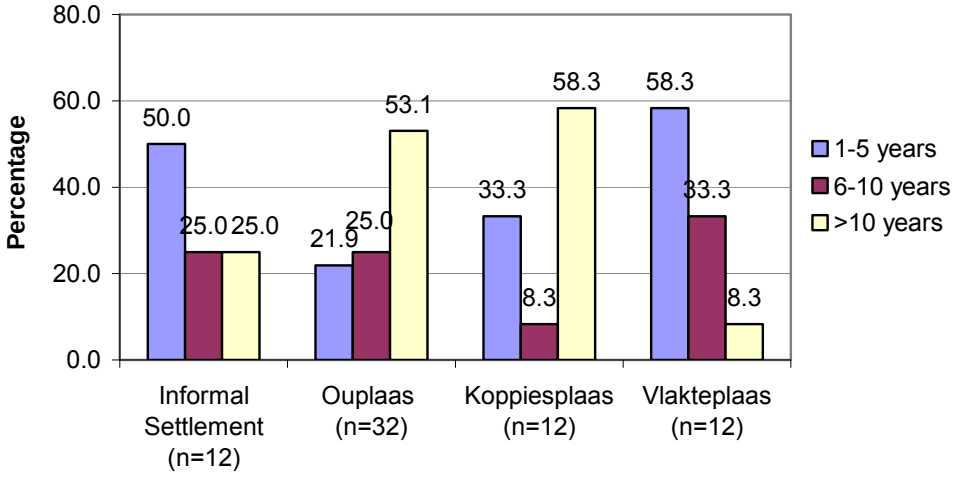


Figure 7.1.4: Participants' length of stay according to farm settings (in %)

7.1.2 Household characteristics and categories

In this study, **a household is defined as all people who reside in one house**. Based on their composition, a total of 49 households have been categorised into three main household categories, namely *conjugal households, male-headed households* and *female-headed households*. Characteristics of these household categories are described below:

○ *Conjugal households (55.1% of all households, n=27)*

This category refers to couples who reside in one residential unit. Couples can either be in a domestic partnership or be married by traditional and/or civil ceremony (see more details in chapter 7.5.1). In the majority of conjugal households (74.1%), the male partner is permanently employed on the farm. In the other conjugal households, male partners are either pensioners (n=3), unemployed (n=3) or employed elsewhere (n=1, social worker[14]). In contrast, only two women in conjugal relationships are permanently employed as domestic workers on the farms. Four women have some kind of regular income from pension grants (n=1), from running a small informal retailer called *tuck shop* (n=1) or from other employment (n=2, painting company in a nearby town and farm school kitchen). As can be seen in table 7.1.2, on average four persons live in conjugal households and the mean number of children per household is 1.7. The majority of households (59.3%) constitute two generations (couples with their children

[14] The social worker in this study lives in the informal settlement and does not share many common characteristics with other farm dwellers in the farm area.

and/or foster children). In a quarter of conjugal households (25.9%), there is only one generation (couples without any children).

○ *male-headed households (20.4% of all households, n=10)*

This household category refers to men who live without a female partner and children. According to the men's marital status, two subcategories are found: *1) single male households (n=4); and 2) men living alone with their partner elsewhere (n=6).* Men in the first subcategory are not engaged in any relationship. The second subcategory refers to men residing alone in a house on the farm, but having partners who live in another residential unit. Five out of six men of the second subcategory own a house in another area where their wife and kids live. These men, also known as migrant workers, work on the farm during the week and go home during weekends to visit their families. An exception is one of the men whose family lives in Mozambique. He visits his family only once or twice a year.

All men of this category are employed on the farms, with 90.0 percent of them being permanently employed and one man being involved in seasonal farm work.

○ *female-headed households (24.5% of all households, n=12)*

Women in this category reside in a house without the presence of a male partner. In two cases, adult male sons live in the house, too. Most of these women live with their children and/or grandchildren, forming two or three generation households (see table 7.1.2). Only three women live alone, having grown-up children elsewhere. Also, female-headed households are divided into two subcategories according to their marital status: *1) single female households (n=8); and 2) women living alone with their partner living elsewhere (n=4)*. Women of the latter subcategory own a house with their male partners in nearby urban areas which they regularly visit.

All women of this category earn a regular income either from pension grants (n=6), employment as domestic workers on the farm (n=3) or from a *tuck shop* business (n=3).

Table 7.1.2 summarises the main characteristics of the three household categories. It further shows the household characteristics of the total study sample. On average, three to four persons live in one household in the investigated farm areas. The average number of children is 1.4 per household and one fifth of all households (22.4%) raise foster children. Most households are one- (40.8%) and two- (40.8%) generation households.

Table 7.1.2: Characteristics of household categories

	Conjugal households		Male-headed households		Female-headed households		Total study sample	
Frequency and percentage of total study sample	n 27	% 55.1	n 10	% 20.4	n 12	% 24.5	n 49	% 100.0
Number of persons per household Mean Std.dev. Min; max	4.0 1.8 2; 9		1.0 0.0 1; 1		3.9 2.5 1; 9		3.4 2.2 1; 9	
Number of children per household Mean Std.dev. Min; max	1.7 1.6 0; 7		0.0 0.0 0; 0		1.9 1.8 0; 5		1.4 1.7 0;7	
Number of households with foster children	n 7	% 25.9	n 0	% 0.0	n 4	% 33.3	n 11	% 22.4
Number of generations per hh	n	%	n	%	n	%	n	%
one generation	7	25.9	10	100.0	3	25.0	20	40.8
1st & 2nd	16	59.3	-	-	4	33.3	20	40.8
1st, 2nd & 3rd	2	7.4	-	-	4	33.3	6	12.2
1st & 3rd	2	7.5	-	-	1	8.3	3	6.1

As shown in figure 7.1.5, the majority of households on the three commercial farms are conjugal households. The minority of households on Koppiesplaas and Vlakteplaas are female-headed households (14.3% and 11.1%). Only in Ouplaas do more female-headed households (22.7%) occur compared to male-headed households (13.6%). This can be ascribed to the farm owner's permission for single women to reside on the farm. Single women living on the three farms have the following characteristics:

- they are or were engaged in permanent farm employment as a domestic worker; or
- they are widowed and their deceased husbands were farm workers on the specific farm; or
- they are related to a male farm worker, for example son or brother.

Figure 7.1.5 further illustrates that the majority of households in the informal settlement are female-headed households (45.5%). It should be kept in mind that snowball-sampling was used to select households in the informal settlement, resulting in a non-representative view on household categories.

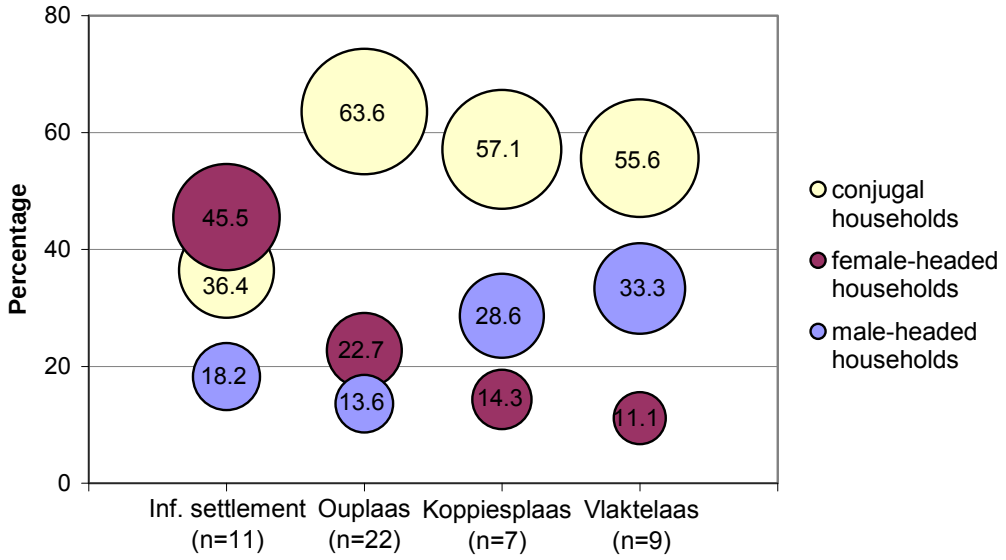


Figure 7.1.5: Household categories according to farm settings (in %)

Households are by no means rigid and inflexible entities. In fact, the majority of the 32 farm households observed from 2005-2007 have changed their composition during this time (59.4%). Another 25.0 percent of households left the farm area and in only 15.6 percent of farm households, changes did not occur. Table 7.1.3 summarises the type of changes that occurred from 2004 to 2007.

Table 7.1.3: Household changes from 2004 to 2007 (multiple responses)

	n	% of respondents (n=32)
no change	5	15.6
adult/s moved in	6	18.8
adult/s moved out	8	25.0
child/ren moved in	5	15.6
child/ren moved out	8	25.0
person/s passed away	5	15.6
new born baby	5	15.6
household left farm	8	25.0

During, 2004-2007, eight households left the farm area because of the following reasons:

- New job on another farm (n=3)
- Moving in with new partner (n=1)
- **Affected by HIV/AIDS and other diseases (n=4)[15].**

HIVAIDS seems to be an important reason to leave the farm area. This might be due to better health care infrastructure in urban areas and proximity to family members who can care for the sick person.

[15] Out of these four households, three were known to be affected by HIV/AIDS. In one household, a very sick person was also suspected to be infected by HIV, but this could not be confirmed.

7.2 Livelihood security

In this chapter the livelihood situation in the farm area will be described in detail, revealing available assets and social dynamics. First, existing employment and income sources as well as the monthly level of income will be illustrated, followed by a description of financial stock. Thereafter, social dynamics including farm dwellers' past experiences and current perceptions regarding their working and living conditions will be explored. This chapter will end with a close view on paternalistic dynamics, discovering the role of the farm owner in the lives of farm workers and their families.

7.2.1 Employment and income sources available within and outside the farm area

The main job opportunity in the area under investigation is employment on commercial farms and only a few alternative income sources are available. The following figure illustrates available income sources according to gender:

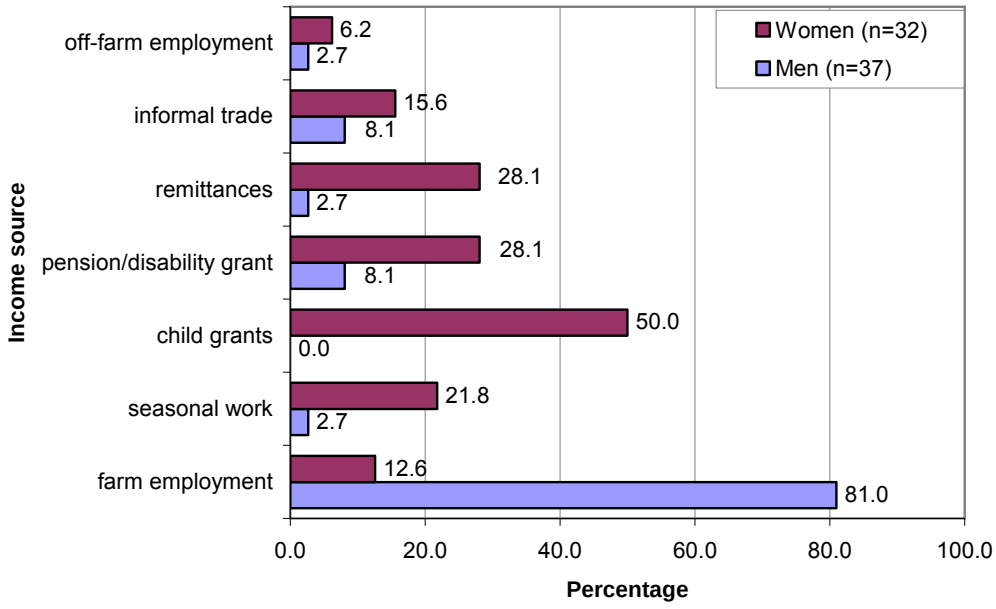


Figure 7.2.1: Income sources of male and female farm dwellers (in %)

Employment on crop and cattle farms is strongly gender-biased. As can be seen in figure 7.2.1, mostly men (81.0%) and few women (12.6%) are engaged in permanent farm employment ($\chi^2(1)=32.29$; $p<0.001$). These women work as domestic workers in the farm owners' houses. Since permanent farm employment is very rare for women,

they rely to a much greater extent on other income sources as shown in figure 7.2.1. Significantly more women (21.9%) are engaged in seasonal farm work compared to men (2.7%) ($\chi^2(1)=6.15$; p=0.013). Seasonal farm work is provided on a daily or weekly basis by farm owners almost throughout the year. A female farm dweller stated during a qualitative interview that it would not be a problem to find short-term jobs (seasonal work) on farms when looking for work. Farm owners are aware of women's limited access to employment and therefore offer seasonal work primarily to women, favouring women who live on their farms. Thus, seasonal farm work provides a flexible and easily accessible income for women. However, due to low salaries, hard working conditions and time constraints, women only work irregularly as seasonal workers, sometimes only once a month or once a year.

Figure 7.2.1 further shows that only three farm dwellers are employed outside of the farm (off-farm employment). One man works as social worker in the informal settlement employed by the provincial government, one woman works as a cook in a farm school and one woman works as a painter for a company in a nearby town. This painting company provides daily transport for its employees from the farm to the construction side in a nearby town. In general, off-farm employment in nearby towns is difficult to access because of irregular and expensive public transport.

Informal trade businesses on the farms are mainly *tuck shops* where people sell one or several goods from their houses (see also chapter 7.4.1). The trade of goods includes purchased and produced foods, small non-food items like washing powder or matches, traditional healing herbs, tailored dresses as well as the illegal trade of alcohol. In this study sample, five people from Ouplaas and three people from the informal settlement reported to run a *tuck shop* business. None of the interviewees from Koppiesplaas and Vlakteplaas reported any type of informal selling business. During informal chats, some farm dwellers stated that farm owners do not allow *tuck shop* businesses on their farm.

Child grants are one of the most important income sources for women with children. Women are eligible to receive ZAR 180.0-200.0[16,17] per child under 15 years (SOUTH AFRICAN SOCIAL SECURITY AGENCY 2010). In the study sample, half of all women receive one or more child grants (see figure 7.2.1). Out of these 16 women, 56.3% receive two, 37.5 percent receive one and one woman (6.3%) receives three child grants.

Other social grants provided by the South African Government are pensions and disability grants. Out of the total study sample (n=69), 13.0 percent receive a pension and 4.4 percent receive a disability grant.

Further, figure 7.2.1 illustrates that more women (28.1%) than men (2.1%) receive regular remittances from family members. The gender difference is significant with

[16] €: ZAR exchange rate at the time of data colletion varied between 1: 9.4 (Feb 2007) and 1: 12.9 (Nov 2008). The average exchange rate was 1: 11.1 (http://www.x-rates.com).

[17] During the time of data collection the child grant increased from ZAR 180.0 to 200.0.

$\chi^2(1)=8.95$; p=0.003. Remittances are sent by spouses (n=4), grown-up children (n=4) or parents (n=2).

More than half of all interviewed farm dwellers (59.4 %) have only one income source. Table 7.2.1 illustrates the number of income sources according to gender. While the majority of men (83.8%) have only one income from permanent farm employment, most women have two incomes (46.9%). Out of 69 interviewees, only five (7.2 %) reported not to have any income. The mean number of income sources differs significantly between genders, with women having on average more income sources (mean 1.6) compared to men (mean 1.0).

Table 7.2.1: Number of income sources according to gender

Number of income sources	**Men (n=37)**		**Women (n=32)**		**Total (n=69)**	
(% per column)	n	%	n	%	n	%
None	2	5.4	3	9.4	5	7.2
1 source	31	83.8	10	31.3	41	59.4
2 sources	4	10.8	15	46.9	19	27.5
3 sources	-	-	4	12.5	4	5.8
Mean	1.0		1.6		1.3	
Std.dev.	0.4		0.8		0.7	
Min; max	0; 2		0; 3		0; 3	
U-statistics	U=333.00, p<0.001					

Through observations, another small income source through ‘piece jobs’ has been identified that has not been captured with the interviews. These ‘piece jobs’ are small supportive jobs mainly between neighbours, including washing laundry, fetching water or fire wood and repairing little things in someone’s house. Depending on their effort, these jobs are paid with ZAR 5.0 to 20.0.

7.2.2 Monthly income of farm dwellers

The monthly level of income varies immensely between the different income sources which have been described in the previous chapter. The following table summarises all mean monthly levels of income according to different income sources and gender:

Table 7.2.2: Level of monthly incomes from different sources according to gender

	Men	Women	Total
Permanent farm work			
N	30	4	34
Mean (in ZAR)	970.1	600.0	926.6
Std. dev.	334.3	258.2	344.8
Min; max	280; 2000	300; 900	280; 2000
Seasonal farm work			
N	1	7	8
Mean (in ZAR)	1000	680.0	720.0
Std. dev.	-	112.6	153.8
Min; max	-	480; 800	480; 1000
Informal trade			
N	3	5	8
Mean (in ZAR)	246.7	902.0	656.3
Std. dev.	127.0	1457.0	1154.4
Min; max	100; 320	50; 3500	50; 3500
Off-farm employment			
N	1	2	3
Mean (in ZAR)	4600.0	300.0	1733.3
Std. dev.	-	70.7	2483.1
Min; max	-	250; 350	250-4600
Remittances			
N	1	9	10
Mean (in ZAR)	50.0	472.2	430.0
Std. dev.	-	778.8	746.3
Min; max	-	50; 2500	50; 2500
Child grants*			
N		16	
Mean (in ZAR)	n/a	388.1	n/a
Std. dev.		864.6	
Min; max		180; 1280	
Pension/ disability grants§			
N	n=3	n=9	12
Mean (in ZAR)	n/a	n/a	838.3
Std. dev.			42.0
Min; max			780; 880
Total income			
N	**36#**	**31#**	**67**
Mean (in ZAR)	**671.3**	**591.0**	**618.0**
Std. dev.	**301.2**	**418.9**	**381.5**
Min; max	**0; 1420**	**0; 1300**	**0; 1420**

* Child grants are paid out to mothers. According to the number of children in the household, the levels vary largely, resulting in a high standard deviation.

§ The level of pension grants does not differ between the genders. During the time of data collection, the levels slightly increased, causing a small standard deviation.

Excluding extreme values (one male social worker earning ZAR 4600 per month; one female *tuck shop* owner earning ZAR 6000 per month)

The level of income from permanent farm work differs significantly between the genders (*U*=21.50, p=0.038), with women earning on average ZAR 600.0 and men ZAR 970.0 (see table 7.2.2). The average monthly income of farm workers in Ouplaas is ZAR 1112.3, in Koppiesplaas ZAR 956.0 and in Vlakteplaas, it is ZAR 884.3. Wage incomes range from ZAR 280.0 to 2000.0, depending on part-time or full-time contracts as well as the job position. From the farm wage, a certain amount of money is

deducted for an unemployment fund, rent and/or electricity, and for food provisions (mainly *mealie meal*). The deductions vary between farms and also depend on the amount of food provisions requested by the farm worker. Money lent from the farm owner during the month might also be deducted from the farm wage. On average 17.9 percent is deducted from the farm wage. During field work, the researcher heard from interviewees in Vlakteplaas that money had been deducted from the wage as punishment because farm workers made a mistake during their work which led to the illness of some cattle.

Seasonal farm work is either paid daily or weekly. In table 7.2.2, the income level of seasonal work has been summed up for one month. However, since most farm dwellers do not work seasonally for a whole month or several full months in a row, these levels should be taken with caution. The weekly income range for seasonal work lies between ZAR 120.0 to 250.0.

Income levels of informal trade businesses clearly depend on the variety of goods sold, ranging between ZAR 50.0 to 3500.0. For the majority of farm dwellers this forms a small additional income, amounting to between ZAR 50.0 and 350.0 (median ZAR 320.0). Only one woman from the informal settlement runs a *tuck shop* as her main business, selling a variety of foods, meals and other goods. She reported to earn an average income of ZAR 3500.0 per month, which is an exceptionally high income in this setting.

Incomes from off-farm employment vary immensely, depending on the type of job. The two women working part-time, one as a cook in a farm school and the other as a painter in a nearby town, earn ZAR 350 and 250 per month, respectively. The one man who works as a social worker for the provincial government earns ZAR 4500.0 per month, the highest income among the male interviewees in this study.

Monthly remittances from relatives amount on average to ZAR 430.0, ranging from ZAR 50.0 to 2500.0. The average level of remittances from partners who live at a distance are higher (ZAR 887.5) compared to the level of remittances from children or parents (ZAR 141.7 and 112.5, respectively).

On average, women receive ZAR 388.1 through one or more child grants. One woman reported to receive a foster grant that amounts to ZAR 1100.0. The average income from old age pension (n=9) and sick grants (n=3) is ZAR 838.8 per month.

The total income of farm dwellers is on average ZAR 618.0. This amount excludes irregular incomes from seasonal work. Even though not significantly different ($t(39.98)=0.75$, $p=0.455$), men earn a higher monthly income (ZAR 671.3) than women (ZAR 591.0). The boxplots in figure 7.2.2 illustrate the different income distributions among men and women.

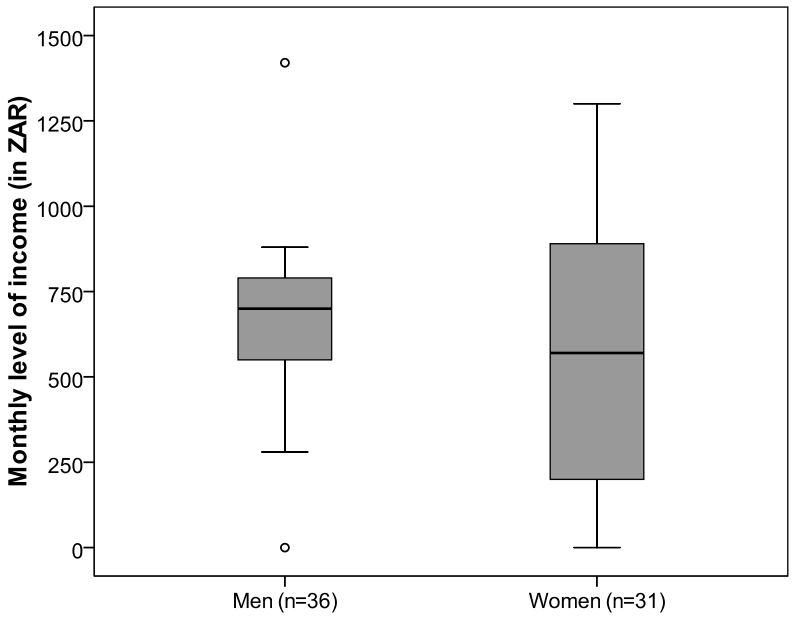


Figure 7.2.2: Level of monthly income according to gender (excluding incomes from seasonal work)

Men's main income source is the farm wage which is why their income range has a relatively narrow interquartile range between ZAR 525.0 and 795.0, with a median of ZAR 700.0. Most women do not have a regular farm wage income and thus rely on alternative income sources which mostly have low income levels. For that reason, women's income range is much wider with scores lying between ZAR 200.0 and 900.0 and a median of ZAR 570.0

So far, only the individual incomes per interviewee have been described. In the following section, the economic situation of households will be illustrated, revealing the number of income earners, income sources, and total and per capita income according to different household categories. These characteristics are summarised in table 7.2.3. Households have on average two income earners (mean 1.8) and two income sources (mean 2.4). Per capita income (excluding incomes from seasonal work) of all households is ZAR 418.4. Differences can be seen between household categories. Due to male-headed households consisting of only one person, household income equals the per capita income. On average, four persons live in conjugal and female-headed households. Thus, the number of income earners and sources is found to be higher, on average two income earners and three income sources (see table 7.2.3).

Table 7.2.3: Economic characteristics according to different household categories (n=47*)

	Conjugal households (n=26)	Male-headed households (n=10)	Female-headed households (n=11)	All households (n=47)
Mean number of persons per household	4.1	1.0	4.2	3.4
Number of income earners				
Mean	2.0	1.0	2.1	1.8
Std. dev.	0.6	0.0	1.4	0.9
Min; max	1; 3	1; 1	1; 5	1; 5
		H(2)=16.29, p<0.001		
Number of income sources				
Mean	2.6	1.1	3.2	2.4
Std. dev.	0.9	0.3	1.2	1.1
Min; max	1; 4	1; 2	2; 6	1; 6
		H(2)=20.56, p<0.001		
Total household income (without seasonal work)				
Mean (in ZAR)	1254.9	562.0	1275.0	1112.2
Std. dev.	547.9	250.4	637.8	589.5
Min; max	530; 2640	0[#]; 830	700; 2930	0; 2930
		H(2)=15.42, p<0.001		
Per capita income (without seasonal work)				
Mean (in ZAR)	353.0	562.0	442.5	418.4
Std. dev.	186.7	250.4	328.8	248.5
Min; max	93; 880	0[#]; 830	117; 1120	0; 1120
		H(2)=5.25, p=0.072		

* Excluding two households with extreme values (male social worker earning ZAR 4600 per month and living in a conjugal household; female *tuck shop* owner earning ZAR 3500 plus additional ZAR 2500 from remittances per month and living in a female-headed household)

[#] One male farm worker does only seasonal work (monthly income ZAR 1000). However, calculations of household incomes exclude seasonal work due to its irregularity. Thus, his minimum income accounts to zero in this category.

Table 7.2.3 shows that conjugal and female-headed households have significantly higher incomes (ZAR 1254.9 and 1275.0, respectively) compared to male-headed households because of their higher number of income earners. However, when looking at par capita income, conjugal households have the lowest per capita income with ZAR 353.0 while male-headed households have the highest per capita income with ZAR 562.0.

Per capita income does not vary significantly between household categories (*H*(2)=5.25, p=0.072) but the boxplots in figure 7.2.3 clearly show differences in income distributions within the household categories. Men's median income is ZAR 615.0 and is surrounded by a relatively narrow interquartile range of ZAR 500.0 to 700.0. Per capita income of conjugal households is the lowest of all three household categories

with a median of ZAR 332.5 and an interquartile range of ZAR 220.0 to 393.0. Women rely on several alternative income sources with small incomes. This is also reflected in the boxplot of female-headed households in figure 7.2.3. Here, the median of the per capita income is the lowest at ZAR 326.0 with the widest interquartile range of ZAR 200.5 to 618.5, positively skewed towards the higher scores.

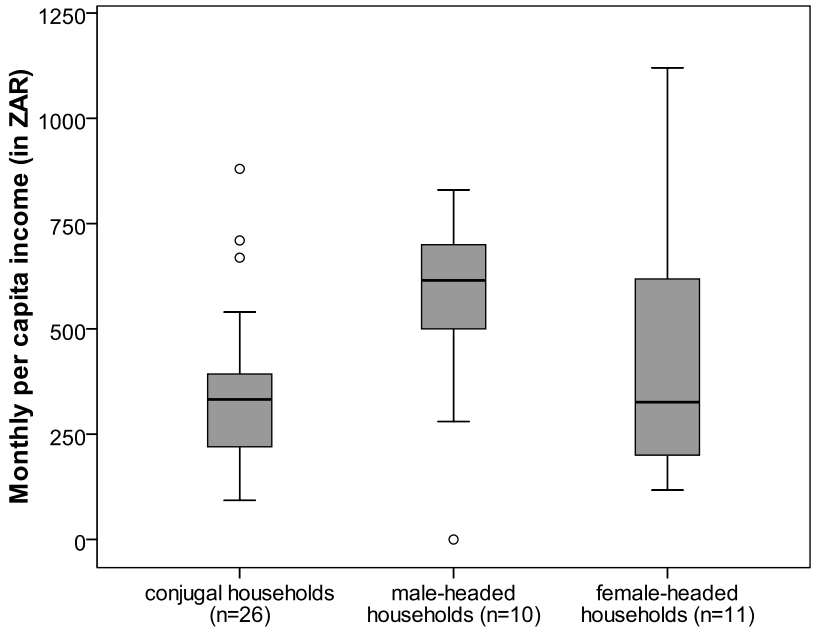


Figure 7.2.3: Monthly per capita income according to household categories

7.2.3 Financial stock: Property, savings and investments

During the structured face-to-face interview, all 69 farm dwellers were asked whether they possess any property outside of the farm, have any savings or other investments. In the following, these financial backups will be described in more detail:

Property

Interviewees were asked if they or other household members possess any property outside of the farm. Out of the total study sample, 37.7 percent (n=26) reported the possession of property. Of these, 61.5 percent (n=16) are men and 38.5 percent (n=10) are women. Three interviewees, one man and two women, reported two properties.

The interviewee is not always the direct owner of the reported property. Table 7.2.4 shows the distribution of ownerships according to gender. While 24.3 percent of men

reported to be the owner of property, only 9.4 percent of women own property. Moreover, 12.5 percent of women reported property which jointly belongs to her and her partner and 13.5 percent of men additionally mentioned property that belongs to their parents.

Table 7.2.4: Ownership of property outside the farm area

	Men (n=37)		**Women** (n=32)		**Total sample** (n=69)	
(% per column)	n	%	n	%	n	%
No property	21	56.7	22	68.8	43	62.3
Owner of property:						
Interviewee	9	24.3	3	9.4	12	17.4
Spouse/partner	1	2.7	3	9.4	4	5.8
Interviewee and spouse	1	2.7	4	12.5	5	7.2
Parents	5	13.5	-	-	5	7.2
	$\chi^2(4)=9.95$; p=0.041					

There are different types of property possessed by farm dwellers (multiple responses, % of respondents, n=26):

- houses (65.4%)
- shacks (38.5%)
- a plot of land (3.8%)
- livestock (3.8%).

The majority of properties are located in urban areas (89.7%) while 10.2 percent are either in rural areas or on another farm. Furthermore, almost three quarters of properties (73.0%) are situated within a close radius of 50 kilometres from the farm area. On average, farm dwellers have owned these properties for 11.4 years.

Since interviewees reside most of their time in the farm area, their property, especially houses, are used or taken care of by other persons. Figure 7.2.4 displays the distribution of persons who are users or caretakers of the property. It comes to the fore that most properties are used by close family members (55.2%), for example children, parents or siblings. Four male interviewees stated that they own a house where their spouses or partners live. They claim this property to be their ‘family home’ which they visit as often as they can. Three interviewees (10.3%) reported that tenants live in their houses, paying a monthly rent. In other cases, affinal and extended family (13.8% and 3.4%, respectively) take care of the property. Only one interviewee stated that he takes care of his own house and that it is not used by any other person.

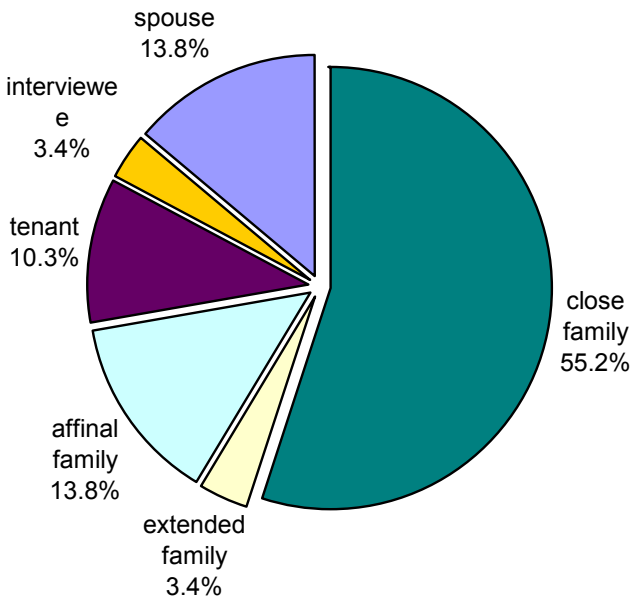


Figure 7.2.4: Distribution of users or caretakers of interviewees' properties (multiple response, % of responses, n=29)

Interviewees were further asked if they have any future plans regarding their property. While seven interviewees (26.9%) do not have any specific plans, the other interviewees have the following plans (multiple responses, % of respondents, n=19):

- live there one day (52.6%)
- place to stay for my children (42.1%)
- build/extend/renovate the house/shack (42.1%)
- sell second property/house (10.5%)
- place to stay for other family members (5.3%).

Savings

Interviewees were also asked if and what type of savings they have. Only two options of savings come to the fore: bank accounts or savings in the house. Out of the total sample, 60.9 percent of farm dwellers save money in the house and only 8.7 percent have a bank account. Table 7.2.5 summarises the type of savings according to gender. There are significant differences between men and women ($\chi^2(2)=10.79$; $p=0.005$). The majority of men (78.4%) report to have savings in the house, whereas 43.8 percent of women do not have any savings. However, caution is advised when interviewees report to save money in the house. It does not necessarily mean that they accumulate

savings. Money might just be kept in the house until it is needed, thus not lasting longer than a couple of weeks.

Table 7.2.5: Interviewees' savings

Type of savings	Men (n=37)		Women (n=32)		Total (n=69)	
(% per column)	n	%	n	%	n	%
Bank account	1	2.7	5	15.6	6	8.7
Savings at home	29	78.4	13	40.6	42	60.9
No savings	7	18.9	14	43.8	21	30.4
	$\chi^2(2)=10.79$; p=0.005					

Other investments

Besides savings, more than half of the interviewees (55.1%) reported to have other investments. Most of them are members of formal burial societies (n=29; 42.0%; 13 men and 16 women) which are comparable to private insurance companies, working on provincial and national level. Interviewees pay a monthly fee to receive financial support in case of death of the insurant or an insured household member. The disbursement covers the expenses for the funeral, including the coffin, ceremonies and services. The monthly fee varies between ZAR 20.0 and 110.0 according to the number of family members covered by the burial society. On average, interviewees pay ZAR 53.4 per month.

Other investments of farm dwellers are rotating savings associations, so-called *stokvels*. A group of people meets once a month and every member deposits a certain amount of money. In most cases, the collected money is directly disbursed to one member of the group. The disbursement rotates between the members every month. In another savings group observed in the farm area, half of the deposited money is saved in a bank account and only paid out to all of its members shortly before Christmas. It has also been observed that these *stokvels* function as informal burial societies. The *stokvel* groups are established by community members and are based on trust. The monthly meetings do not only have the purpose of saving money but also give a platform to assemble, discuss other matters and exchange news. Out of the total study sample, ten interviewees (14.5%; 5 men and 5 women) reported to be a member of a *stokvel*. The expenditure for these groups ranges from ZAR 25.0 to ZAR 500.0 per month.

7.2.4 Past experiences and reasons for coming to the farm area

To reveal former work experiences, farm dwellers were asked if they have lived or worked on other farms or in urban areas before they came to the farm area.

The majority of interviewees (85.5%) stated that they have worked or lived on other farms before coming to this farm area. There are no significant differences between the number of men (89.2%) and women (81.3%) who lived on other farms before ($\chi^2(1)=0.87$; $p=0.350$). Interestingly, most interviewees (79.6%) have worked or lived on farms within a radius of less than 50 kilometres. Several reasons were mentioned why interviewees left the former farms (multiple responses, % of respondents, n=59):

- Farm was sold and /or farm owner left (33.9%)
- Dissatisfaction with working conditions and salary (22.0%)
- Termination of work contract (13.5%)
- Illness or injury (8.5%)
- Dissatisfaction with life in farm community (6.8%)
- Partner/spouse got a job somewhere else (6.8%)
- Moving closer to family members (5.1%)
- Other[18] (5.1%).

In most cases, farm dwellers left former farms because of events which could not be directly influenced by them, including changes in farm ownership, termination of work contract and illness or injury. Moreover, it can be seen that dissatisfaction with working conditions and salaries as well as disagreements with people in the farm community led to the decision to leave a farm.

Out of the total study sample (n=66[19]), 43.9 percent of interviewees have previously lived in urban areas. Also here, gender differences do not occur ($\chi^2(1)=0.22$; $p=0.641$). The majority of interviewees (65.5%) have lived in urban areas which are less than 50 kilometres away. In the urban areas (n=25), most of them were engaged in low income jobs (64.0%) like domestic worker, mine worker, employee in butchery, waiter, farm worker, construction worker and mechanic. Other interviewees were unemployed (16.0%), scholars (12.0%) or ran a *tuck shop* business (4.0%).

[18] This category includes: spouse passed away; building a new house in urban area; becoming a pastor.

[19] Three interviewees did not answer this question.

Interestingly, more than half of interviewees (58.1%) reported that they knew friends or relatives living in the farm area before they decided to move there.

7.2.5 Farm dwellers' perceptions regarding their working and living conditions

To reveal farm dwellers' perceptions regarding their working and living conditions, they were asked whether they like the farm life, what advantages and disadvantages they experience, how satisfied they are with certain aspects of farm life, and if they would prefer to live elsewhere. Moreover, interviewees were asked what plans they have for the future.

With regard to the very general question if interviewees like or dislike the farm life, the majority of interviewees (71.6%) stated that they like it. Women and men do not differ significantly in their perceptions, 77.4 percent of women and 66.7 percent of men like the farm life ($\chi^2(1)=0.95$; $p=0.330$).

Interviewees reported several advantages and disadvantages of the life on farms which are summarised in table 7.2.6. Advantages of farm life reported by farm dwellers are low crime levels (20.3%), food provisions by farm owner (14.5%), free or cheap accommodation and electricity (13.0%), job opportunities (13.0%), support from farm owner (11.6%) and a quiet and peaceful life (11.6%). The main disadvantages experienced by farm dwellers are inadequate conditions of accommodation and sanitation (14.5%), lack of infrastructure and services (14.5%), low incomes (11.6%) and lack of transport (10.1%).

Table 7.2.6: Interviewees' perceptions regarding advantages and disadvantages of farm life (multiple responses)

Advantages of farm life	% of respondents (n=69)	Disadvantages of farm life	% of respondents (n=69)
No advantages	27.5	No disadvantages	37.7
Low crime level	20.3	Inadequate conditions of accommodation and sanitation	14.5
Food provisions by farmer	14.5	Lack of infrastructure and services (shops, health and social services)	14.5
Free/cheap accommodation and electricity	13.0	Low incomes	11.6
Availability of job opportunities	13.0	Lack of transport	10.1
Support from farmer, e.g. transport and credits	11.6	Dislike farm community	7.2
Life is quiet and peaceful	11.6	No work opportunities	5.8
Possibility of keeping own cattle and growing vegetables	10.1	Dependence on farm owner, no security regarding jobs and accommodation	5.8
Less poverty and suffering than in townships	7.2	No fast help in emergencies (ambulance, police)	4.3
Life is cheap	7.2	Too quiet and too isolated	2.9
It is easy to collect wild foods and fire wood in the surroundings	5.8	Poverty and isolation	2.9
People help each other	4.3	Long working hours	1.4
Shop is near	1.4	Discrimination by white people	1.4
		Uncertainty due to land claim	1.4

In addition to the more general open-ended questions regarding farm life, interviewees were asked about their satisfaction regarding specific aspects of farm life, including working conditions, income, accommodation, sanitary facilities, shopping facilities, health service, support in emergencies, transport opportunities, access to loans and general safety and security. Figure 7.2.5 shows the satisfaction rates of these aspects according to gender (37 men and 32 women). The majority of men (93.9%) and women (74.2%) are satisfied with the safety and security situation on the farm. Moreover, the majority of men are satisfied with the available health service (91.4%) and support in emergencies (89.2%). In contrast, highest satisfaction rates among women appear with regard to working conditions (85.7%) and accommodation (84.4%). Farm dwellers are least satisfied with transport opportunities to nearby towns (30.6% of men and 28.1% of women) and sanitary facilities (45.9% of men and 50.0% of women). Further, men are least satisfied with their income (25.7 %) and access to loans (29.7%) while women are least satisfied with shopping facilities (28.1%) and health services on the farm (46.9%).

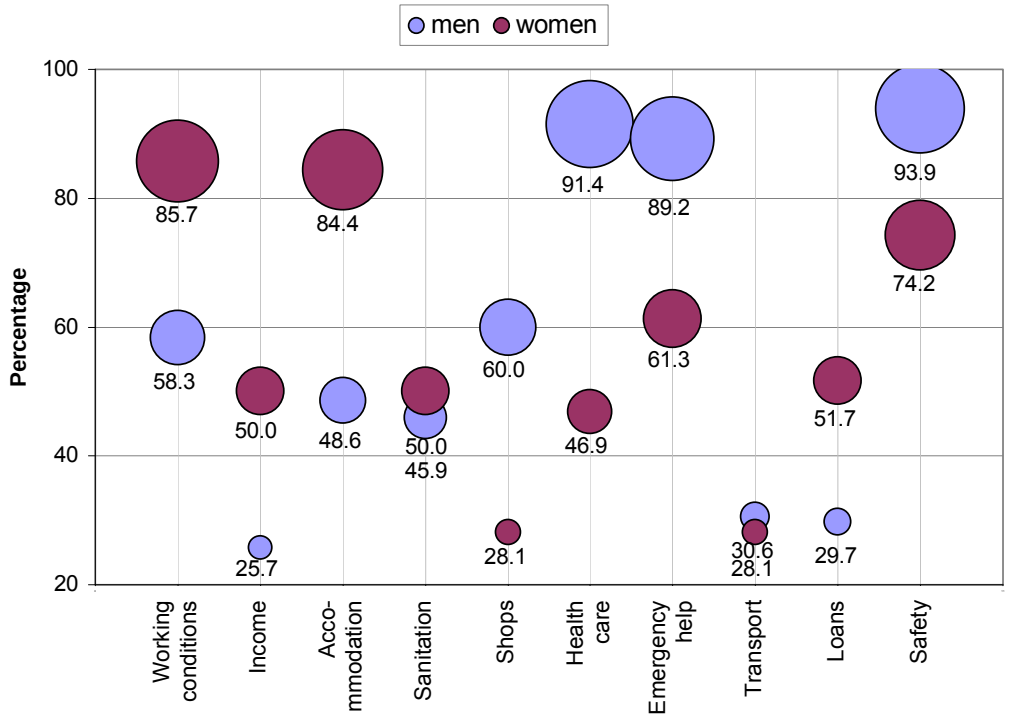


Figure 7.2.5: Satisfaction regarding different aspects of farm life according to gender (in %)

During the interview, farm dwellers were asked their opinion regarding improvements of the quality of life on farms. The following suggestions came to the fore (multiple responses, % of respondents, n=69):

- Improvement of accommodation and sanitary facilities (82.6%)
- Increase of salary (43.5%)
- Better transport infrastructure (13.0%)
- Better working conditions (13.0%)
- Increasing security and safety (4.3%)
- More job opportunities (2.9%)
- More support from farmer (2.9%)
- Food provisions from farm owner should be free (2.9%)
- Other[20] (5.8%).

[20] This category includes: faster emergency service (ambulance, police); increase credit allowances by farm owner; access to land for own subsistence agriculture; more team work within the land restitution process.

These suggestions are in line with the results from the perceived advantages and disadvantages as well as the satisfaction with certain aspects of farm life. It becomes obvious that inadequate accommodation and sanitation, lack of basic infrastructure and services and transport as well as low incomes are the major issues of concern among farm dwellers which need the most improvements.

During the interview, more than half of farm dwellers (53.6%) reported that they would prefer to live somewhere else. Significant differences between men and women do not exist ($\chi^2(1)=1.09$; $p=0.296$). Figure 7.2.6 shows the preferred places where farm dwellers would like to live. The majority (81.1%) stated the urban areas as their desired place to live. Only a few farm dwellers reported that they would like to live on another farm (8.1%), in a rural area (5.4%) or in the nearby informal settlement (5.4%).

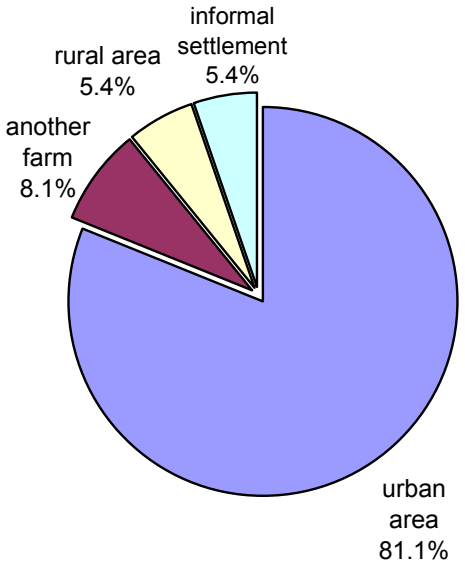


Figure 7.2.6: Interviewees' preferred place to live (n=37)

There are several reasons why farm dwellers prefer to live somewhere else (multiple responses, % of respondents, n=37):

- More and better paid job opportunities (32.4%)
- Possibility of possessing property (house, land, cattle) (29.7%)
- Better life, more flexibility and more possibilities (27.0%)
- Better living conditions (accommodation, sanitation, infrastructure) (18.9%)
- Life not controlled by farm owner (16.2%)
- Closeness to family (13.5%)

- Better general treatment in the society (5.4%)
- Other[21] (8.1%).

Interviewees were further asked if and what plans they have for their future. Every second interviewee (50.7%) stated not to have any plans. The other half reported the following future plans (multiple responses, % of respondents, n=34):

- Open own business (mostly *tuck shops*) (58.8%)
- Start small scale farming (14.7%)
- Get a better job (14.7%)
- Move to urban areas (11.8%)
- Own a house (11.8%)
- Other[22] (17.6%).

7.2.6 Role of farm owner in the life of farm workers

Employment and life on commercial farms in South Africa is particularly characterised by the role of the farm owner. Through qualitative interviews, informal chats and observations, the role of farm owners on the three commercial farms was explored.

The main role of the farm owner is the role as employer. He wants to successfully run his farm and therefore relies on the productivity of his farm workers. Thus, the farm owner is in the powerful position to appoint or dismiss permanent or seasonal workers. Since he is the head of the farm, he also has the right to set certain regulations regarding the working conditions, like working hours, level of salaries and deductions, number of leave days and type of work. The farm owner does not only provide jobs and income to his workers, in most cases he also provides accommodation. Usually, only the farm worker, his wife and children are allowed to reside in one house. Permission needs to be obtained when other family members want to move in. In addition, overnight visitors and temporary guests are usually not allowed to stay in the farm workers' houses. In most cases the right to reside on the farm ends when work contracts are terminated, resulting in the eviction of farm workers and their families. The strictness of these rules, however, varies between the three farms. For example,

[21] This category includes the following answers: People have manners; more space; uncertain farm future because of land claim.

[22] This category includes: Moving to another farm; extend house in town; going back to school; higher education for kids; register for pensions; save money.

several alternative household formations and pensioner households were observed in Ouplaas (see chapter 7.1.2).

Besides employment and accommodation, the farm owner further provides subsidised food, mostly *mealie meal* which is deducted from the monthly wage. Depending on the good will of the farm owner, transport, medical care, small credits and other small benefits are also provided. For example, the farm owner in Vlakteplaas provides transport for his workers and families once a month to grocery stores in a nearby town. In case of illness, the farm owner and his wife provide medication or they drive their workers to a doctor or hospital in town. Farm workers also stated that they can borrow money from farm owners in case of a funeral or other expensive urgent family issue. The credit granted by farm owners will be deducted from the farm wage at the end of the month. Particularly domestic workers often have the chance to receive other small material benefits from farm owners, for example old blankets or sheets. The provisions by farm owners go far beyond a typical employer-employee relationship, including financial, instrumental, lodging and material support. There are no formal regulations for most of these types of support and they depend very strongly on the farm owners' attitude and good will as well as the on the farm set-up. The extent of these provisions often determines the perceptions farm workers have towards the farm owner. Positive relationships to farm owners are exemplified through the following quotes:

> "We usually go for help to the farmer because if he knows early, he understands and really helps a lot". (male farm worker)

> "He [farm owner] is a good man. Everybody around here likes him". (female farm dweller)

> "He [farm owner] is a good farmer. He is young and he knows very well how to run a farm. He always comes up with ideas for the people". (male farm worker)

The remoteness and marginalisation of the farm setting, inadequate infrastructure and limited basic services make farm dwellers strongly dependent on the provisions of the farm owner. Farm workers' dependency on farm owners comes to the fore in the following quotes:

> "I would like to quit the job but she [the farm owner's wife] threatens me that she won't benefit me anymore with driving to town or to the doctor". (female domestic worker)

> "The transport situation on the farm is very difficult. […] I am tired to be stuck on the farm and always asking somebody when I want to go somewhere. Every month end, we have to ask the farmer to drive us to town to do groceries". (female farm dweller)

> "When our kids are sick, she [the farm owner's wife] doesn't drive with us to the doctor. Instead, she gives us medication out of her hand". (female farm dweller)

> "If one needs to do something, one always has to ask. This makes life a bit difficult". (male farm worker)

The farm owner, as employer and provider, has the power to imply certain rules and regulations that can even influence the farm workers' private lives. Farm workers often do not have any other choice than to obey because of their dependence on the farm owner due to limited alternatives and the fear of loosing their jobs and homes.

Though this was not reported on the three investigated farms, some farm owner might misuse their powerful position. Rudeness, violence or sexual harassment might be the most extreme forms of power misuse by farm owners. The following quotes describe general perceptions and extreme situations, experienced by farm dwellers:

> "Farmers are bad. They chase the people away and there is nothing what the people can do about it. It also happens very often that farmers treat their workers bad or even beat them". (female farm dweller)

> "One day a white farmer [not of the three farms observed] drove passed me and he stopped to ask me to join him. When I got closer to the car, I could see that he didn't wear anything else than a shirt. I ran away immediately". (female farm dweller)

One female farm dweller reported during informal chats that she experienced sexual harassment when she worked as a domestic worker on a neighbouring farm. Her case is documented in box 7.2.1.

> Lindiwe worked for one week as a domestic worker [on a neighbouring farm]. While she was working, the old farm owner started to harass her. She told us that this old farmer wanted to sleep with her. He was taking of his shirt and waved with condoms in his hands, saying all the time to her "Lindiwe! Kom, kom!" She was so shocked that she ran away. While she was telling the story one could see how upset she was about it.
>
> Lindiwe told the farmer's wife what has happened. The wife replied that she will throw her husband out of the house. However, until today she did not do it.

Box 7.2.1: Case study Lindiwe: Escaping from sexual harassment

Lindiwe's case shows that farm owner's might misuse their power and start to harass their domestic workers. Lindiwe was strong enough to escape and to quit the job. However, job opportunities are scarce in the farm area and if women depend on income to secure their own and their children's livelihoods, they may not have any choice than to cope with the situation. As can be seen in box 7.2.1, one strategy to cope with sexual harassment is to inform the farm owner's wife.

Working with the same employees for long periods secures mutual understanding and trust, thus establishes a good working environment and productivity. Moreover, a sense of responsibility towards the farm and the farm owner was also found among farm workers as is illustrated by the following quotes:

> "Since he [the farm owner] is gone [working overseas], I take care of the madam. If something happens on the farm, I will tell her immediately. He told me to take good care of her. If I don't, he will come back and kill me." (male gardener)

> "[The farm owner] wasn't on the farm because he went to Johannesburg or Pretoria. During the night people from [a nearby town] came with a van to steal sheep. They came here and loaded in as many sheep as they could and then they drove them to [the town]. After that they came back for a second time, in the same night, to load more sheep into the van. Someone of the farm workers saw it and he sent someone to inform the farmer [of a nearby farm]. The farmer reacted immediately, got into his car and caught the van on the road. The farmer shot the two thieves. This was still during apartheid". (female farm dweller)

As these quotes show, farm workers can establish a strong sense of belonging and responsibility for the farm. However, they also demonstrate farm owners' authority and power within the farm area. On the other hand, farm owners feel committed to their workers and aspire to work with a permanent, trustworthy and productive work force. The following quotes illustrate perceptions of workers on farm owner's reaction when employees look for new jobs or leave the farm:

> "The farmer doesn't like it when his workers go out from the farm to look for other jobs at other places. He feels heartbroken because of this. When he sees them in town, he will just pull over and ask what happened to the guy who just runaway like that". (male farm worker)

> "We would like to buy a car but it seems that the farmer is against it because he is afraid that we would move somewhere else when we have a car". (farm worker couple)

The main features of the role of the farm owners in the lives of farm workers is summarised in figure 7.2.7.

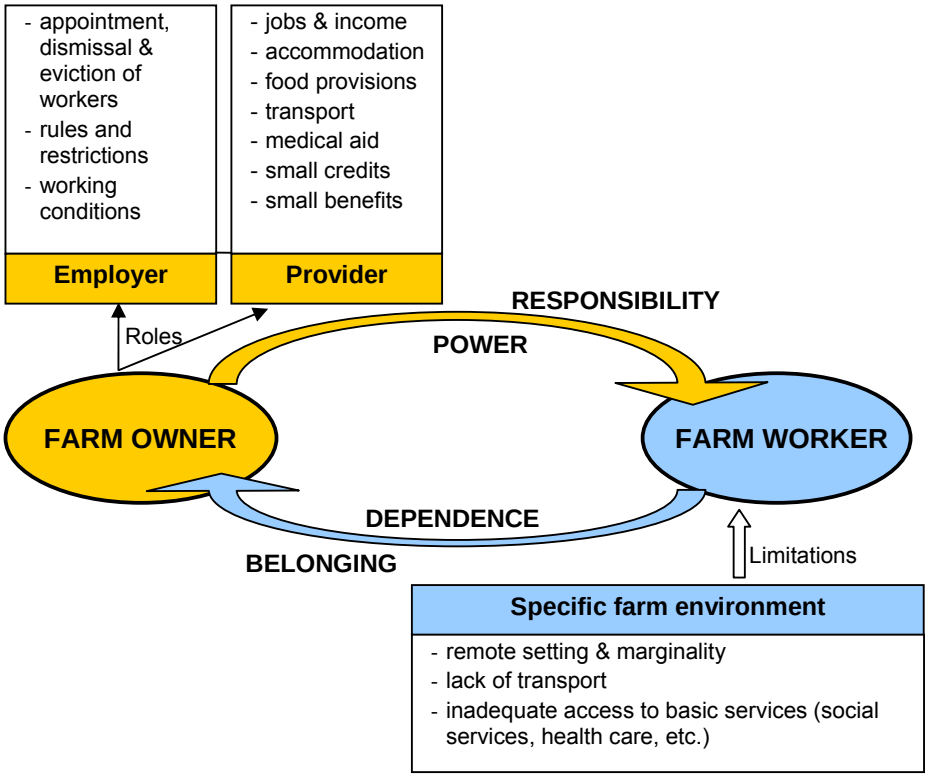


Figure 7.2.7: Role of farm owner in farm workers' life

When asking farm dwellers how they perceive the role of the farm owner regarding their living conditions during the structured face-to-face interview, the majority of interviewees (59.4%) stated that they perceive him as very supportive. However, 15.9 percent of the interviewees do not think so and 13.0 percent stated that the farm owner is only sometimes supportive.

Some interviewees elaborated further, pointing out positive and negative roles of the farm owner (multiple responses, % of respondents, n=23). **Positive roles** ascribed to the farm owner are the assistance with funeral arrangements (8.7%) and small loans (8.7%), the provision of free or cheap food (8.7%) and the provision of jobs (4.3%). **Negative roles** ascribed to the farm owner are too low salaries and too high deductions (43.5%), inadequate housing and sanitary conditions (39.1%) and too little payment in kind (food provisions) (8.7%), only money-making ambitions (4.3%) and rudeness of his foremen (4.3%).

7.3 Livelihood constraints and shocks

Livelihoods of farm dwellers are characterised by constrained conditions and are affected by several shocks. Both constraints and shocks add to the vulnerability of farm dwellers. This chapter will provide a detailed illustration of general livelihood constraints and acute livelihood shocks. Moreover, it will emphasise the tragic roles of alcohol abuse and HIV/AIDS on livelihoods. Finally, perceptions of farm dwellers regarding the land resititution process in Ouplaas will be described.

7.3.1 General livelihood constraints faced by farm dwellers

Results of two focus group discussions in Ouplaas reveal livelihood constraints as perceived by farm dwellers. Since the discussions were conducted with one male and one female group separately, they shed light on major constraints experienced by men and women. Answers were grouped into different themes, namely intra-household dynamics, social relations, finances, health, education and infrastructure.

As can be seen in table 7.3.1, men face a number of constraints concerning social relations. Men see the dependency on the farm owner and also on other persons as one major concern of their life. Furthermore, they stressed there is mistrust within the community which results in low collective activities, for example labour unionisation. With regard to financial matters, men dislike the fact that they are not able to accumulate any savings or open their own trade businesses (mostly *tuck shops*). Moreover, they are worried about their health because of limited protection during work and insufficient care for sick people from the farm owner's side. With regard to education, men find that there are not enough education opportunities, especially with regard to further education. Therefore, it happens that men sometimes fear to be taken advantage of.

While men are mainly concerned about work related issues, women's problems mainly focus on intra-household, health and infrastructural issues. Table 7.3.1 shows that women experience conflicts and disagreements with their partners, particularly with regard to income allocation. Women report that a lot of people in the community suffer from various illnesses and fear the spread of HIV/AIDS. Furthermore, concerns in their lives are long distances to schools for their children, poor housing infrastructure and inadequate structures to plant vegetable gardens.

Table 7.3.1: Main problems faced by of men and women in Ouplaas as revealed in focus group discussions

	MEN (n=8)	WOMEN (n=11)
Intra-household dynamics		- Conflicts and disagreement with men (especially with regard to money)
Social relations	- Dependency (on farmer and other people) - Mistrust in the community resulting in low collective actions (e.g. unions) - Insecurities and fear of loss of jobs as a result of the land claim - They think it is unfair that they have to pay for the foods they produced	- Conflicts/mistrust in the community
Finances	- Lack of saving and investment opportunities (no opportunities to open trades or businesses)	- Low wages
Health	- No protection against work related diseases combined with insufficient care for sick people by farmer	- Lot of people are affected by illnesses and fear of HIV/AIDS - Lack of appropriate health care for women and children
Education	- Lack of education and lack of further education opportunities - Fear of getting deceived by other people due to lack of education	- Long distance to schools for children
Infrastructure	- Lack of sanitation facilities	- Poor housing infrastructure - Inadequate infrastructure to plant vegetable gardens

Farm dwellers in both groups were further asked how they respond to the problems they face. As shown in table 7.3.2, men and women alike draw on various social networks to cope with daily constraints. While men would ask their neighbours and the farm owner for help, women prefer asking relatives and exchange food with neighbours. If constraints become unbearable, male farm dwellers would leave the farm. However, they agreed during the discussion that leaving the familiar environment of the farm is difficult, especially because of limited financial means. Women, on the other hand, would get engaged in various activities to secure their family's livelihoods, like starting a *tuck shop*, investing in funeral societies and *stokvels* as well as getting loans. If everything fails, they would also leave the farm for good.

Table 7.3.2: Men's and women's response to constraints

	MEN (n=8)	WOMEN (n=11)
Social networks	- Ask neighbours for help - Ask farmer for help or advice	- Ask relatives for help - Exchange food with neighbours
Other strategies	- Leave the farm	- Start own selling business - Getting credits (farmer, shop owner, loaner) - Investment in funeral societies & *stokvels* - Leave the farm

7.3.2 Acute livelihood shocks: loss of job, crime, conflicts, sickness and death

Food and livelihood security of farm dwellers can be threatened very easily by a number of factors. Based on qualitative analysis of interviews and field observation data, five main livelihood shocks were revealed. First, losing their job is one of the major livelihood shocks experienced by farm workers. This not only means that they will lose their income and other provisions by the farm owner, but in most cases it is directly linked with eviction, resulting in total deprivation of their existing food and livelihood sources.

Second, sickness poses another shock for farm dwellers' food and livelihood security. Costs for health care (e.g. for transport and medication) are high, increasing household's financial constraints. Since women are the main caretakers in the household, they will experience the burden of caring for the sick person. Long periods of sickness can further result in loss of the farm job with all its consequences.

Third, the death of a household member implies serious consequences for the household. Households are driven into financial constraints and debts not only because of high funeral costs but also because of the loss of income of the deceased person. If the deceased person is a farm worker, the women will most likely be forced to leave the farm to search for a new home. The case study of Bongiwe in box 7.3.1, describes the situation of a women living on the farm after the death of her husband.

Bongiwe is approximately 55 years old and is widowed. She lives alone in one of the smaller farm worker houses in Ouplaas. Last year, her husband who was permanently employed on the farm, passed away. The farm owner does not pressure her to leave the farm. Bongiwe is allowed to reside on the farm as long as she wants. However, she lives in very poor conditions. There are almost no furniture and other assets in the house. Often when we pass by her house she is drunk, telling us that she does not have any food and that she is in urgent need for money. Two months later, we do not see her anymore. Her neighbour tells us that she left the farm to move in with her new boyfriend who lives in a town about 200 kilometres away.

Box 7.3.1: Case study Bongiwe: No man, no good

Even though Bongiwe is not threatened by eviction, she is under serious financial constraints. With the loss of her husband, she has also lost the regular household income. Being alone, she is not able to obtain enough money to maintain her livelihood. The only way for her to escape these difficult living conditions on the farm is to find a new partner with whom she can move in and start a new life somewhere else. The case of Bongiwe does not only show the impact of death on a household's well-being, but it also highlights the vulnerable position of women in the farm area who are extremely dependent on their male partners.

The fourth livelihood shock observed in this study is conflict within the household, the community or with the farm owner, which might deprive farm dwellers of their food and livelihood security. Intra-household conflicts often result in women having to leave the farm (see also chapter 7.5.5). If there are conflicts within the community or with the farm owner, farm dwellers might decide to leave the farm and search for jobs on other farms (see chapter 7.2.4).

Lastly, farm dwellers' food and livelihood security might be threatened by criminal activities within the farm area. Although farm dwellers perceive crime levels within the farm area to be relatively low, cases of theft, violence and rape have been reported during informal chats. For example, interviewees reported the following events:

> "Ohh, there is a lot of crime. People like to steal. Around here, people stole cables. The police tried to make us aware of it and called upon us to assist them with reporting crime to them. They want the community to work hand in hand with the police to catch the thieves". (male social worker)

> "Here, it is not safe to save my money in the house. Especially because people know that I live here alone. I pray every night to God that he keeps me safe during the night. […] I know a neighbour who is coming to help me when anything happens. When something strange happens during night, I call him. In the past, it happened

that somebody knocked at my door late at night. I was very frightened and I did not open the door". (female farm dweller who lives in the informal settlement)

"Last week, a girl got almost raped by two men. The girl could escape but the two men injured her both hands very badly with a knife. The police came and arrested them. It is a terrible story. Both men actually live around here". (female farm dweller)

The consequences of violence are complex leaving victims with psychological and/or physical injuries. Households experiencing violent crime may have to cope with long periods of sickness or even death, resulting in financial and emotional stress. Matlakala's case, in box 7.3.2, illustrates the dramatic consequences of violence and the particularly vulnerable position of women.

Matlakala is 55 years old and lives in a well equipped shack in the informal settlement. She is not married, but has a partner since ten years who is working as a mechanic in the next town where he also lives. Her granddaughter Lebogang, 16 years old, resides with her most of the time.

Matlakala successfully runs several small businesses in the farm area. She has a tuck shop in her house where she sells tinned food, sugar, maize flour, oil, snacks, sweets, fried fish and small toiletries. She also makes and sells dresses, runs a burial society and operates a food stand during the monthly local market. Moreover, she also works twice a week as a micro-loan trader in town and employs three women who prepare and sell chicken dishes on the streets of another town. Matlakala earns an estimated income of ZAR 3,500 and 5,000 per month, one of the highest in the farm area. Her achievements are mainly based on her strong self motivation to accomplish her visions.

In 2008, Lebogang visited her mother's place in a nearby town. While her mother left the house for grocery shopping, a man broke into the house and raped Lebogang. When her mother returned, she found her lying on the floor with her arms tied up, her mouth filled with cloths, undressed and injured. Lebogang reported the incident to the police and after she identified the man, he got arrested. The man tried to bribe Lebogang, offering her ZAR 70,000 for not reporting him to the police. However, she rejected the offer and since then has to live in fear to be killed by this man or his friends. Lebogang received antiretroviral (ARV) treatment right after the incident to decrease the possibility of a HIV infection. She also received counselling by a social worker.

Since the incident, the life of the whole family has changed. Lebogang quit school. She and her mother moved permanently into Matlakala's house in the informal settlement to be safe against further attacks. Due to grief and emotional distress, Matlakala is not able to work anymore and stopped all her businesses, not earning enough money to pay outstanding bills and further medical treatment for her granddaughter.

Box 7.3.2: Case study Matlakala: Losing hope due to sexual violence

Matlakala is a successful and highly motivated business woman and earns one of the highest incomes in the area. However, the emotional distress caused by the rape of her granddaughter, deprives her of her power and motivation to continue her businesses, putting her and her family under severe financial constraints. The case also illustrates the change of the household structures due to the criminal incident. Due to the fear of being attacked once more, Lebogang and her mother left their home and moved into Matlakala's house in the informal settlement. In this way, the women can support each other emotionally and later maybe also financially.

Figure 7.3.1 provides an overview of the five main livelihood shocks threatening farm dwellers' food and livelihood security.

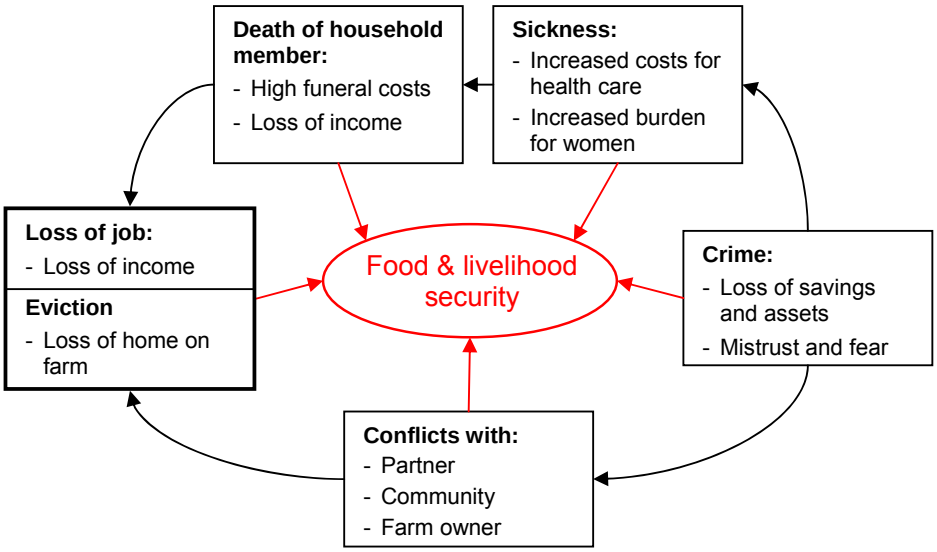


Figure 7.3.1: Factors threatening food and livelihood security of farm dwellers

7.3.3 Alcohol abuse among farm dwellers

Informal conversational interviews and observations revealed that the abuse of alcohol is quite common within the farm area. This can be ascribed mainly to limited recreation facilities on farms but also to farm dwellers' feelings of disempowerment and dependency, and missing future perspectives. Alcohol is mostly consumed in taverns on weekends and especially at the end of the month after men have received their salaries. These taverns are central meeting points within the farm area. Here, alcohol is used as a medium to socialise with other people, escaping the isolation of farms. This comes to the fore in the following quotes:

> "All people from around here go to the tavern on weekends. They also play music there and dance". (female farm dweller)

> "The workers got their bonus and the women went with that money to get drunk and buy beers for their men. They are very often drunk". (female farm dweller)

> "Especially on weekends, everybody is drinking. They either go to the tavern to [Ouplaas] or to [Vlakteplaas]". (female farm dweller)

> "I will only sing on weekends when I am drunk". (female farm dweller)

> "On month end we like to go drinking. We drink the whole day and night. Then we go back to our houses at 6a.m. to wash ourselves and afterwards we go dancing and drinking again". (female farm dweller)

> "The tavern is also open during the week but we normally go on weekends. They play dangerous music [dance music] and one can also play pool there". (female farm dweller)

Some farm dwellers earn their income by selling alcohol illegally. They buy stocks of alcohol and sell it from their houses without having the licence that permits their trade. The following quotes provide examples of how farm dwellers access alcohol from illegal sources.

> "On Saturday nights, the shop owner comes here with his truck to bring alcohol. He sells it to Bekinkosi [community member] who then sells it to the others". (female farm dweller)

> "They are all drinking. It was pay day yesterday and now they are all at the tavern or in the squatter camp [unlicensed sellers in the informal settlement]". (male farm worker)

Most female farm dwellers are very knowledgeable in brewing traditional beer. It is mostly prepared for community church services and traditional ceremonies, as stated by one female farm dweller:

> "There will be a church meeting on Sunday in my house. For that I am going to prepare African traditional beer tomorrow".

One female farm dweller showed the researchers how to prepare traditional beer with maize meal and yeast on a Thursday night. The beer was brewed in a 100 litre barrel, providing enough beer for the community during the whole weekend.

> *She was very proud of herself when the mixing process was done. She laughed and said in a joking way*: "I know how to make very strong beer. I will taste it tomorrow and then I will go drunk to work".

Alcohol gives many farm dwellers the chance to forget the hardship of their lives. However, alcohol abuse directly stresses household's food and livelihood security because the consumption of alcohol is costly. Moreover, the money spent on alcohol depletes the amount available to buy adequate and enough food for the household. Under the influence of alcohol, it may also happen that women do not care for their household chores, like cooking meals and cleaning. They might neglect their children, too. The following quotes describe the situation:

> "They [men] buy beer with it [salaries] and not caring what to eat at home". (female farm dweller)

> "The children come dirty to school. No washing done. It's the way of life. Parents don't care enough and drink too much beer". (primary school teacher)

> "A woman always cares much more to buy food and clothes for children than a guy could ever do. The only thing that men know is to drink the money and not buy food". (female farm dweller)

> "I also give it [traditional beer] to kids. It makes them stronger". (female farm dweller)

> *Mpho was busy washing her pots and other kitchen utensils. We asked her if she is busy preparing her lunch. She replied:* "No, the dishes are still from the weekend. I drank the whole weekend that's why I could not clean it earlier".

Alcohol abuse might be one of the reasons for conflicts and domestic violence within the household, as reported by one woman during informal chats:

> "On month end we like to go drinking. […] At those days, I do not care about anything. Then my boyfriend often gets angry with me, for example if I don't care about the household chores like cooking, cleaning and washing. And it happens that he gets so angry that he hits me. We both fight with each other. Now I did not drink anything since two months and we get along fine. I am doing my work and he is satisfied".

Alcohol may also lower one's inhibitions to get engaged into sexual relationships more easily, resulting in men and women having sexual relationships with different partners.

> "Sometimes they are so drunk that they don't even know with who they slept with".

Moreover, alcohol can increase the readiness to crime, violence and rape, severely threatening livelihoods. The link between alcohol and violent crime are illustrated by the following quote:

> "I was almost two years in jail because of assault. It happened at a tavern when I was drunk". (male farm worker)

7.3.4 Social implications of HIV/AIDS on farm dwellers' lives

The issue of HIV/AIDS within the farm communities is characterised by absolute silence and denial, and thus HIV/AIDS seems to be invisible and almost non-existent. Yet, the harsh consequences of HIV/AIDS affect farm dwellers in many respects, strongly exacerbating their already vulnerable position.

Data on the social implications of HIV/AIDS were collected by doing observation, informal interviews with farm dwellers and key-informant interviews. In the following, the causes of HIV/AIDS and available support structures will be described in-depth. A case study will exemplify the life of a HIV positive person within the farm community, revealing common social, financial and infrastructural constraints which are faced by HIV/AIDS-affected people and households living in farm communities.

Causes for HIV/AIDS among farm dwellers

Metaphorically speaking, the already existing livelihood constraints, build a wide-open doorway through which HIV/AIDS can easily enter farm communities.

Particularly the lack of education combined with inadequate access to education and information is a decisive factor contributing to a high HIV/AIDS prevalence among farm workers. During interviews, it came to the fore that the notion of HIV/AIDS is often congruent with three key-words: condoms, severe sickness and death. The following field journal entry of an informal chat with a female farm dweller exemplifies the situation:

> When we mentioned the topic HIV/AIDS, one could sense that she [the interviewee] felt a bit uncomfortable. I think it was because she became very insecure about what to say and she was afraid that she will not be able to answer our questions because she doesn't know anything about it. The only things she could connect to AIDS were: sickness, death and condoms. Everything else is very unclear for her. She admitted openly that she does not know. She told us that the children get educated at school but the adults don't have any source information. (field journal entry, May 2008)

This shows, on the one hand, that there is a basic knowledge of the transmission and health-related consequences of HIV/AIDS. On the other hand, it illustrates that knowledge is insufficient regarding prevention, treatment, future life perspectives and strategies to deal with HIV and AIDS. This often results in fear and insecurities which inhibit most farm dwellers to get tested. One female farm dweller said during an interview:

> "I am afraid to do the HIV test because I don't want to come out of the clinic crying".

This attitude leads to late HIV-testing when the infected person is already very ill and faces low life expectancy. In turn, this confirms farm dwellers' wrong perception that HIV/AIDS leads directly to sickness and death, leaving no hope for the future. Moreover, ignorance, misconception and insecurities build the basis for stigmatisation and discrimination against infected persons. For example, one female farm dweller stated that social interactions with HIV-positive people are avoided because of misconceptions and fears of infection.

> "A person would get discriminated by the community if he [or she] would openly admit his [or her] status. People would not visit so often anymore because they are afraid to get infected while having meals or drinks with them".

It is especially difficult for HIV/AIDS affected farm dwellers to access adequate health services and counselling. Mobile health clinics visiting the farm area only provide HIV-testing, but do not have the capacities for treatment and counselling. The latter is only provided in specific clinics in urban areas, so-called wellness clinics. However, due to time-consuming and costly transport, these clinics are difficult to reach. Also, social services which provide counselling and social support to HIV affected families are located in urban areas and thus difficult to reach. Particularly for persons who are already severely affected by AIDS, it is close to impossible to access health and social services in urban areas. In addition, the fact that HIV/AIDS awareness and education campaigns hardly reach the isolated setting of farms contributes to the lack of knowledge regarding HIV/AIDS.

Inadequate housing and sanitary conditions as observed in the farm area (see chapter 6.2) may facilitate the spread of infectious diseases. Combined with limited food diversity (see chapter 7.4.2), the immune system may be weakened, accelerating the progression to AIDS.

In order to gain more job opportunities and higher incomes, farm dwellers may engage in labour migration to urban areas, increasing the occurrence of multiple relationships. However, this was mostly observed in the informal settlement among households which are not engaged in any kind of permanent farm employment. Furthermore, poverty can be a reason why women exchange sex for goods, money or other favours which certainly increases the risk of HIV infections. Also, the 'sugar-daddy' phenomenon has been reported during interviews, describing sexual relationships between young girls and older men who return sexual favours with money or goods. A social worker describes the situation in the following quote:

> "So now, unemployment in this area, make the kids like money. Everything is money for them. If I give her ZAR 50, so now [she thinks] 'with this money I can go and eat something or buy clothes, buy shoes'. You know, all the women like fashion. […] So now, these old men, they abuse them emotionally and physically. […] These men buy them."

In Vlakteplaas, contract workers were recruited during the labour intensive harvest season. The majority of them came from distant urban or rural areas. They may bring HIV/AIDS into the farm communities when they engage in sexual relationships with community members.

The high extent of alcohol abuse as observed in the farm area (see chapter 7.3.3) may increase the likelihood of multiple sexual relationships and the readiness for domestic violence and rape, all of them being high risk factors for the prevalence of HIV/AIDS. Moreover, alcohol abuse decreases the health and nutritional status of the body, resulting in a faster progression to AIDS.

Moreover, traditional views and gender relations strongly determine the spread of HIV/AIDS in various ways. The dependency of women on their male partners (see more detailed descriptions in chapter 0) places particularly women in a very vulnerable position. Often they have to endure infidelity and multiple relationships by their male partners and do not have the power to negotiate safe sex, as illustrated in the following quote:

> "When I start discussing with my boyfriend about condoms, he would start arguing with me that he doesn't want to use them. And at the end, he would force me to have sex with him". (female farm dweller)

Though it is widely known among farm dwellers that condoms protect against HIV, most people do not like to use them.

> "No, they don't use condoms. Especially men, they don't like to use them". (female farm dweller)

> "People don't want to use condoms. They say: You cannot eat a banana with the skin." (female farm dweller)

Hence, the unpopularity of condom use has fatal consequences on the HIV/AIDS prevalence among farm dwellers.

Finally, persisting unequal power relations between the farm owner and farm worker (see chapter 7.2.6) leave the latter in a vulnerable position, also with regard to HIV/AIDS. Feeling dependent and powerlessness, they might not be able to ask for information and support or articulate certain needs.

The multiple and often inter-related causes which increase the vulnerability of HIV/AIDS in farm communities are summarised in figure 7.3.2.

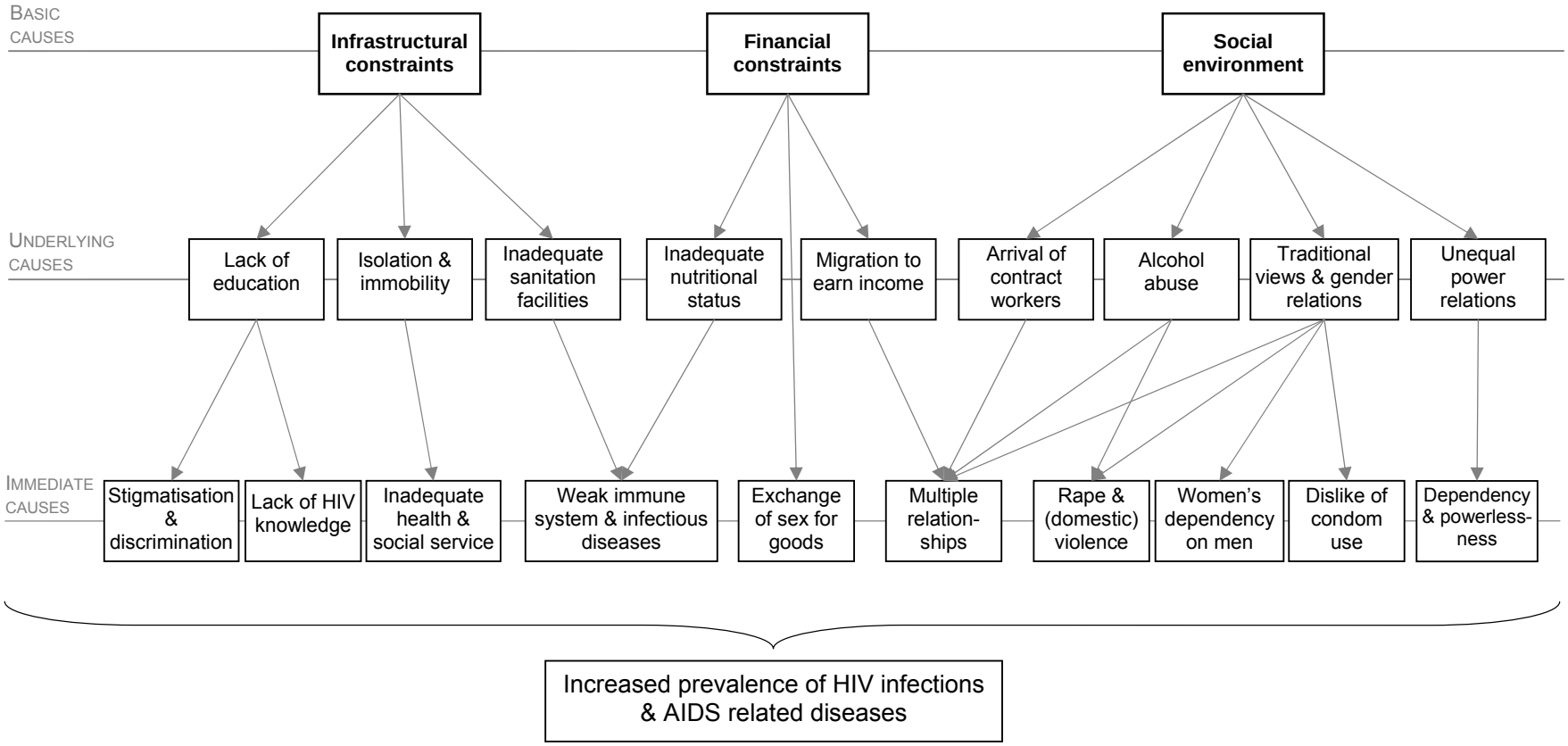


Figure 7.3.2: Causes that lead to increased vulnerability of HIV/AIDS within farm communities
(Categorisation of the three causality levels drawn from UNICEF 1990: 22)

Available support structures in the farm area for HIV/AIDS affected persons

Support structures for HIV/AIDS affected persons are very limited predominantly due to the isolated setting of the farms. Nevertheless, some forms of support are available, including the mobile health clinic, social workers, the farm owner and his wife, church, and the farm school.

During an interview with a nurse of the **mobile health clinic** attending the farm area, it was revealed that the clinic provides HIV-testing and pre-counselling before the test. Moreover, free condoms are provided and sometimes brief group counselling sessions on HIV/AIDS or other sexually transmitted infections (STIs) take place. Nonetheless, the mobile health clinic does not accommodate the needs of HIV-infected people and does not have the capacity to run awareness campaigns and education lessons on HIV/AIDS. In addition, the service of the nurses of the mobile clinic has a bad reputation. Many women complained that the nurses are unfriendly and do not treat them with respect. Hence, general trust towards the nurses is missing which clearly hinders farm dwellers to seek help at the mobile clinic regarding sensitive issues like HIV/AIDS.

Interviews with two **social workers**, both living in the farm area, revealed that they partly care for HIV/AIDS affected households and put efforts into the realisation of HIV awareness campaigns. One is a social health worker who is employed by a NGO called Saint's Caregivers. He is responsible for the care of sick people at their homes. Among his duties are washing and feeding patients, cleaning houses, the administration of medication and the provision of food parcels. He also provides support regarding personal and health problems. However, during informal interviews, he highlighted that he lacks crucial qualifications in the area of nursing and counselling. The other social worker is a community development worker who is employed by the provincial government of the North West. His main tasks refer to organisational and administrational matters. Nonetheless, he cooperates with the municipality to organise events and awareness campaigns in the farm area, mobilising and motivating the people of the community to attend these campaigns. He is further responsible to report needs and problems to the municipality and thus plays a key-role for improvements, particularly with regard to basic service provisions.

The life of farm dwellers is characterised by a high involvement of the **farm owner and his wife** (see chapter 7.2.6). In the case of Vlakteplaas, the farm owner's wife stated during an interview that she thoroughly observes the workers' health and motivates them to get tested when they are sick. She provides transport to doctors in town for testing and treatment and pays the medical bills. In turn, she knows exactly who of the workers are infected. Having this knowledge, she monitors and controls the antiretroviral treatment and provides fortified maize meal for a better nutritional status.

Although the **church** is not directly involved into any activities regarding HIV/AIDS on farms, it does play a role in supporting people, providing emotional support and advice, and possibly also by assisting with financial means for funeral arrangements (see

chapter 7.7.1). A student preacher of the reformed church in Ouplaas reported that the topic of HIV/AIDS is not directly addressed during church services, but that sermons often contain topics such as abstinence and faithfulness which indirectly touch on causes of HIV/AIDS on farms.

The **farm school** does not provide an official support structure for people affected by HIV/AIDS. However, an interview with the principal of the school revealed that the school provides basic education on HIV/AIDS for young children and teenagers, trying to decrease the future risk of infections.

Case study of a HIV positive person

Box 7.3.3 describes the case of Paseka, a HIV positive man who lives with his family in the informal settlement.

Paseka is 52 years old and lives with his wife and three children, aged 8 to 15 years, in the informal settlement. Paseka's mother tongue is isiZulu and he does not speak the local language seTswana. During his life, Paseka has worked on several crop and animal farms and in the mining sector, often as migrant worker, in Limpopo and the North West Province. Three years ago, he moved with his family to the informal settlement, hoping to get a job in a diamond mine.

Last year, Paseka became so sick that the ambulance brought him to a hospital in a nearby town. There, he got tested for HIV and was found to be positive. According to him, the doctor only told him that he will never get healthy again and that he is going to die. He did not receive any counselling, only a prescription for 'pills' (ARV treatment). Paseka takes his pills regularly and acknowledges that they help him to feel better.

Paseka's family lives from two child support grants, amounting to ZAR 400.0, and his disability grant of ZAR 880.0. Most of Paseka's grant is spent on children's clothing and school equipment. He states that the money is not enough to meet all the needs of his family, particularly with regard to food. Although no one of his family has to go without food, they regularly worry about not having enough food. *Mealie meal* is available throughout the month, but fresh foods, such as vegetables, fruit and meat, are only seldom on their plates because they cannot afford them.

Before Paseka found out that he is HIV positive, he did not know anything about the disease. He admits that up to now he does not know enough about it because he did not receive any counselling and also HIV/AIDS education campaigns do not reach the farm area. During the interview, Paseka states that his wife suffers from miscarriages, revealing unprotected sexual intercourse with his wife. When probing into the issue, he admits that he does not know how to prevent HIV transmission. So far, his wife has been tested negative for HIV.

He says that people in the farm community are aware of HIV/AIDS, but there is a general lack of knowledge about it. People keep silent about HIV/AIDS, only when they are drunk, they have the courage to speak it out loud, for example in the tavern they would say 'See here, I'm drinking my HIV money [disability grant]'. To avoid discrimination and gossip, he does not disclose his status in the community. The only person who knows that he is infected is his wife. He also does not want to tell his children, being afraid that they accidently pass it on within the community.

The main impact of the HIV infection on Paseka's life is that he does not feel as strong anymore as he was before. Besides facing financial constraints, Paseka's major concern is access to adequate health services. He receives his treatment only in specific hospitals in urban areas. However, transport is time-consuming and costs him about ZAR 200.0, making it difficult for him to regularly attend HIV-specific health services.

Paseka does neither have other relatives nor friends in the community who could support him. He says that his wife is his only friend.

Box 7.3.3: Case study Paseka: Living with HIV in the farm community

The case study again emphasises common perceptions and problems regarding HIV/AIDS in the farm community. Paseka only got tested when HIV had progressed to AIDS, making him already very ill and weak. The late diagnosis of the HIV infection and hence the late entry into ARV treatment severely decreases the chance for a long and healthy life with the virus. Paseka receives his ARV treatment in a specific hospital in a nearby town. However, it is difficult for him to attend the treatment because of the long distance to the hospital and the already tight financial situation of the household. Besides, Paseka has not been enrolled in any health, social or psychological counselling, resulting in a very poor knowledge of HIV/AIDS. Particularly striking is the fact that he does not know how to prevent his wife from being infected, although his wife is one of the most important persons in his life. Nonetheless, it is important to acknowledge that Paseka does not understand the local language seTswana which might be a reason why he cannot receive proper counselling and does not understand existing awareness campaigns. Ignorance and stigmatisation with regard to HIV/AIDS within the community are experienced by Paseka, too. The fear of discrimination and exclusion inhibits him to disclose his status. Thus, he keeps silent about the topic like everyone else in the community. Paseka's family lives in relatively poor conditions and thus, the disability grant forms the main income of the household. However, the money is not enough to secure adequate nutrition for all household members.

7.3.5 Perceptions regarding the land restitution process

The most recent change in Ouplaas has been the land restitution to two claimant communities (see chapter **6.1**). During the structured face-to-face interviews, 14 interviewees reported to be beneficiaries of the land restitution. They live in Ouplaas (n=6), informal settlement (n=4) and Koppiesplaas (n=4). During the interview, 49 persons were asked what they think about the land claim and how it will influence their life. Farm dwellers of Vlakteplaas are not involved as claimants and, thus, were not asked their opinions regarding the land claim. Table 7.3.3 shows different perceptions of beneficiaries and non-beneficiaries regarding the land restitution in Ouplaas. Most beneficiaries and non-beneficiaries perceive the land restitution as positive and appreciate that people got the land back that once belonged to their ancestors. However, 28.6 percent of beneficiaries and 20.0 percent of non-beneficiaries think that the restitution will not be successful because of lack of farming experiences and lack of financial resources.

Table 7.3.3: Thoughts of beneficiaries and non-beneficiaries regarding the land restitution in Ouplaas (multiple responses)

(% of respondents)	**Beneficiaries** (n=14)	**Non-beneficiaries** (n=35)
It is a good thing	35.7	71.4
Will not be successful because of lack of experience and resources	28.6	20.0
People got the land back that belongs to them	14.3	17.1
Opportunity for people to farm for their own livelihoods	28.6	5.7
Lack of information about the process	28.6	5.7
Will bring improvements in living conditions	-	11.4
Intransparent and unfair claim	-	8.6

Farm dwellers were further asked how the land restitution will influence their lives (see table 7.3.4). Interestingly, more non-beneficiaries (22.9%) than beneficiaries (14.3%) believe that the restitution process will improve the general living conditions within the farm area. On the other hand, beneficiaries mostly expect more jobs and higher salaries (28.6%). Again, many persons of both groups expressed their doubts about the success of the restitution. In their view, the restitution can only be successful when the government provides more assistance and financial resources and when people are involved who have farming experience and knowledge like the farm owner. Particularly non-beneficiaries are worried to lose their jobs and that poverty and unemployment will increase (20.0%).

Table 7.3.4: Perceptions regarding the influence of the land restitution on beneficiaries' and non-beneficiaries' lives (multiple response)

(% of respondents)	**Beneficiaries** (n=14)	**Non-beneficiaries** (n=35)
Improvement of living conditions (infrastructure, basic services, accommodation)	14.3	22.9
More jobs and higher salaries	28.6	17.1
People can farm their own land and produce own food or earn income through selling their products	14.3	14.3
Experience in farming is needed (farm owner's support)	21.4	20.0
Assistance of government is needed	14.3	17.1
More poverty and unemployment	14.3	20.0
Worsening of living conditions (including fights and eviction)	7.1	14.3
No influence	7.1	17.1

These responses reflect general observations regarding the land restitution in Ouplaas. Beneficiaries are happy and proud that they are finally eligible to possess their own land. However, in most cases people do not yet have any plans on how to use the land. Through informal conversations, it came to the fore that most claimants want a plot of land to build their homes on and maybe cultivate the land or keep cattle. Specific plans to continue large-scale commercial farming are only heard from the claimants' spokesperson who is currently trying to learn farming skills from the former farm owner.

Moreover, non-beneficiaries living in the informal settlement have expressed their fear of eviction because the spokesperson wants only beneficiaries to reside in the informal settlement.

7.4 Household food security

This chapter will provide insights into the food and nutrition situation among farm dwellers. It starts with an outline of available food sources and will then describe food diversity in farm dweller households. Thereafter, farm dwellers' worries about food and experiences of food shortages and hunger will be illustrated. The chapter closes with the classification of households into different food security categories and their specific attributes. The methodologies applied as well as the categories used in this chapter are largely based on LEMKE (2001).

7.4.1 Availability of food: commercial supply, food provisions, own production, collecting, hunting and food sharing

Availability of food is an important aspect of household food security. Different food sources are available for farm dwellers as illustrated in box 7.4.1. Except for supermarkets in town, all food sources are located within the farm area.

Available food sources for farm dwellers:

- supermarkets in town
- grocery stores in farm area
- tuck shops in farm area
- mobile street vendors
- pension day market
- food provisions by farm owner
- food provisions by social workers (in informal settlement)
- own food productions (vegetable garden/livestock keeping)
- collecting wild fruit and vegetables; hunting
- food sharing between family and/or friends/neighbours

Box 7.4.1: Food availability for farm dwellers

As described earlier (see chapter 6.2), limited means of transport hinders farm dwellers to overcome the distance of 30 to 40 kilometres to the closest town and this complicates access to supermarkets. Nevertheless, supermarkets in town offer a great assortment of foods and other commodities at reasonable prices, which is why most

farm dwellers do their main grocery shopping in town once a month after they have received their salaries or social support grants.

There are two grocery stores within the farm area. One is located in the area of Ouplaas and the informal settlement and is easily accessible for the people living there. Farm dwellers from Vlakteplaas and Koppiesplaas have to walk approximately seven kilometres to reach the store (see also chapter 6.2). These grocery stores have a lower assortment of commodities and lack variety of fresh foods which are sold at higher prices compared to supermarkets in town. Nevertheless, this is where the majority of farm dwellers regularly purchase their food several times during the month. Other places where food can be purchased are *tuck shops,* run from the home of the business owner. The size of the shop and its assortments can vary immensely. Observations in the research setting showed that there are several *tuck shops* in the informal settlement, having a large variety of goods, including purchased or self-prepared food items and other goods, like washing powder, matches and cigarettes. *Tuck shops* in farm worker houses are rare and only have a small range of goods, like snacks, sweets or meat. The advantage of purchasing food from the farm stores and *tuck shops* is the possibility of buying food on credit, enabling farm dwellers to access food during times of financial constraints.

Mobile street vendors were only observed in Ouplaas and in the informal settlement. The reason is most likely the central location of Ouplaas and the informal settlement, the proximity to the main road as well as the high number of inhabitants in this area. In most cases, these vendors are either farm owners from other farms who sell their products directly within the community or they are individual persons coming from urban areas.

Once a month when social support grants are disbursed by the local government in the Ouplaas area, a market offers different foods and other commodities. Also, self-made meals, like fried fish or *vetkoek*, are sold by women living in the surrounding areas.

Free or subsidised food provisions by the farm owner are a very distinct feature, significantly contributing to household food security of farm workers. All farm workers receive subsidised *mealie meal* as part of their payment once a month. According to the season, also fruit and vegetables are provided. In Vlakteplaas and Koppiesplaas (before the farm's sale), farm workers also receive milk and sometimes have the possibility to purchase vegetables and meat from the farm owners. All farm workers report that they also receive meat for free when a cow dies. Domestic workers have a special position within the farm owner's household. In addition to their regular food provisions, they also receive meals in the farm owner's house during their work day.

In a very few cases, farm dwellers living in the informal settlement report that social workers provide food parcels to very poor and vulnerable households or household affected by HIV/AIDS.

Food production through home gardens and livestock keeping is not very common among farm dwellers. Only 21.7 percent and 33.3 percent of farm dwellers grow

vegetables or keep livestock, respectively. Table 7.4.1 shows that most vegetables found in home gardens are tomatoes, pumpkin, carrots and *morogo* (green-leafy vegetables). The majority of farm dwellers who keep livestock have chicken. Some households also keep duckling, pigeons and pigs.

Table 7.4.1: Most common home garden vegetables and livestock of farm dwellers

Vegetables	Percentage of respondents (n=15)	**Livestock**	Percentage of respondents (n=23)
Tomato	53.3	Chicken	95.7
Pumpkin	46.7	Duckling	17.4
Carrots	33.3	Pigeons	13.0
Morogo	33.3	Pigs	13.0
Beetroot	26.7	Cows	8.7
Green beans	26.7	Sheep	4.3
Maize	26.7	Goats	4.3

Depending on the seasons, it was also observed that female farm dwellers collect wild fruit and vegetables, for example prickly pears and *morogo*. Only one female interviewee also indicated that her husband goes hunting for warthogs and springboks to provide meat for his family.

Besides purchasing, producing or collecting food, farm dwellers draw on family, friends and neighbours for joint meals or exchange of foods (more detailed description in chapter 7.6).

7.4.2 Household food diversity

To assess household food diversity, a complementary food situation questionnaire (see appendix 3) was used during the structured face-to-face interview. Interviewees in 44 households were asked what kind of food they have in the house, which type of food they would prefer to eat more often and whether they experience problems in obtaining certain types of foods.

On average, interviewed farm households had 5.7 food items in the house (Std. dev. 3.2). As can be seen in figure 7.4.1, more than half of the households (56.8%) had less than seven food items in the house at the time of the interview.

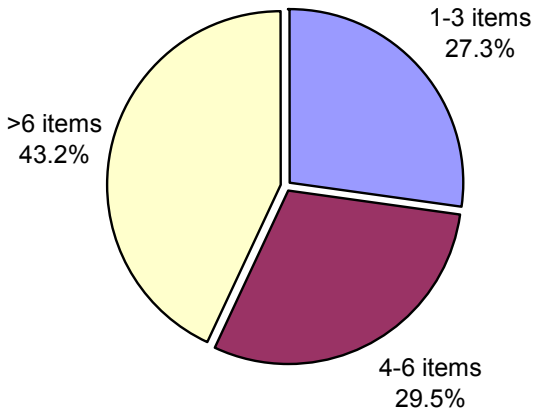


Figure 7.4.1: Number of food items in the house at time of the interview

Food shortages mostly occur before people receive their salaries or social grants. Due to the fact that most households are only able to do larger grocery shopping once a month (after receiving their salary or grants), food stocks often become depleted at the end of the month. Moreover, limited availability of storage facilities, such as fridges and freezers, inhibit the adequate storage of fresh foods, making farm dwellers mainly rely on staple foods.

Types of food being available in most houses at the time of interview (multiple responses, % of respondents, n=44) were:

- *mealie meal* (86.4%)
- sugar (68.2%)
- tea (61.4%)
- vegetables (52.3%)
- rice (50.0%)
- flour (43.2%)
- oil (27.3%).

Mealie meal, sugar and tea are the most common food items found in farm dweller households. Tomatoes, onions, cabbage and potatoes are the main types of vegetables available. Besides rice, flour and oil, a few households also mentioned to have meat (25.0%), tomato sauce (20.5%), milk (18.2%), soup (15.9%) and coffee (13.6%) in the house.

When asked whether they would prefer to eat certain types of food more often, all interviewees expressed their desire to eat the following food more often (multiple responses, % of respondents, n=44):

- meat (52.3%)
- vegetables (47.7%)
- juice and cold drinks (36.4%)
- fruit (29.5%)
- rice (29.5%)
- milk (15.9%)
- *pap* (maize meal porridge) (15.9%).

It can be seen that particularly fresh foods, such as meat, vegetables, fruit and milk, as well as cold drinks, such as coca-cola or lemonade, are most desired by farm dwellers. Preferred vegetables are cabbage (18.2%), beetroot (11.4%), spinach (9.1%), potatoes (9.1%), tomatoes (6.8%) and carrots (6.8%). The most preferred fruits are apples (11.4%), bananas (9.1%) and oranges (9.1%).

Farm dwellers were further asked whether they sometimes experience problems obtaining certain types of food. The majority of farm dwellers (81.8%) stated to have problems obtaining certain types of food, mainly meat and vegetables. More than half of interviewees (58.3%) indicate that they do not have enough financial means to purchase these foods, while 41.7 percent report that the limited availability of these food items in the farm shops, long distances to supermarkets and few transport opportunities are the main reasons why they cannot buy these foods. The following quotes exemplify the difficulties of farm dwellers in obtaining fresh foods, especially meat and vegetables:

> “There are sometimes other kinds of food [meat and vegetables] that I wish I can have. But because of lack of money I can’t have them”.

> “I buy it [meat and vegetables] during the pension day but when it is finished, I don’t have anymore”.

> “Sometimes I can’t get what I want from the shops”.

> “We don’t buy a lot [of fresh foods] because it gets rotten quickly”.

> “There is no transport to go and buy these kinds of foods”.

7.4.3 Worries about food, experiences of food shortage and hunger

Using the household food situation questionnaire, interviewees were asked whether they are worried about food for the next day and why. About two thirds of all households (65.9%) report to have worries about food (see figure 7.4.2). The most frequent reason given is the lack of money to buy enough food (51.7%). One in five households (20.7%) report that it sometimes happens that they do not have any food in the house.

The majority of farm dwellers have *mealie meal* throughout the month because it is provided by the farm owner. However, side dishes, also called *seshebo,* such as meat and vegetables are missing (see previous chapter 7.4.2). Almost every forth household (24.1%) is concerned about eating the same food every day linked to a lack of money, resulting in unbalanced diets absent of meat and vegetables, as described in the following comments:

> "I do worry about eating *pap* and milk each day".
>
> "Sometimes we have maize to cook *pap* but we don't have something to eat it with, such as meat".
>
> "I worry if I don't have money to buy *seshebo*".

If households experience worries about having no food for the next day, this indicates a risk of running out of food. However, it does not necessarily mean that households really do run out of food. To get an indication of the occurrence of food shortage and hunger, interviewees were additionally asked whether they sometimes go hungry and whether they think that there is sometimes not enough food for their children. Figure 7.4.2 illustrates the share of households that worry about food and experience hunger.

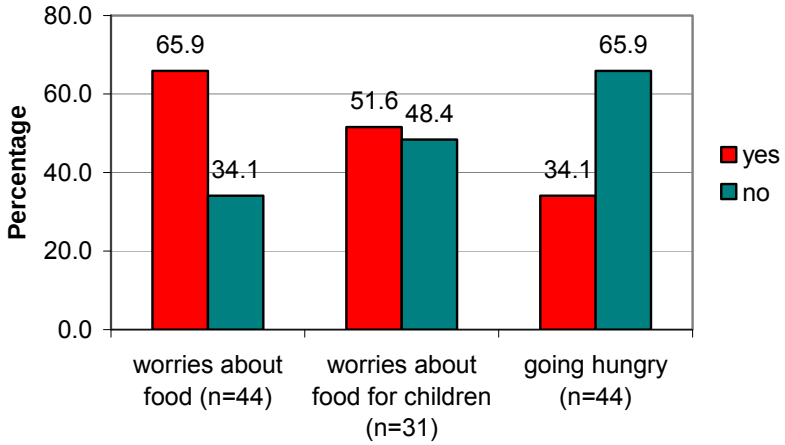


Figure 7.4.2: Worries about food and experiences of hunger among farm dwellers (in %)

Of those households with children (n=31), 48.4 percent indicate that they always have enough food for their children (see figure 7.4.2). Some interviewees explain that they make sure that their children have enough food and that they would rather eat less to ensure enough food for their kids (36.4%). However, every second household with children (51.6%) experiences food shortages that affect their children. The majority (56.3%) usually do not have enough food for their children during the middle of the month, while 37.5 percent indicate that it sometime happens that they lack food for their children. One interviewee also reported that she worries about the diet of her children because they do not get enough vegetables and fruit.

Out of 44 households, one third (34.1%) indicated that they sometimes experience hunger (see figure 7.4.2) which happens regularly in the middle of the month to 46.7 percent, while 46.7 percent are only affected sometimes. One household reports to experience hunger when only water and *mealie meal* is available which does not fill their stomach.

7.4.4 State and categories of household food security

In the previous sections, the general situation of farm dwellers regarding access to and availability of food as well as experiences of hunger has been illustrated. To assess the specific state of household food security, 44 households were classified into categories of food security that are adopted from LEMKE (2001: 218). In her research about food and nutrition security of black South African households, LEMKE established four categories of food security: very food insecure, food insecure, relatively food secure and food secure. Several indicators of food security are taken into account to classify households into these categories. Figure 7.4.3 summarises all indicators used for the food security classification and illustrates the distribution of food secure and insecure households.

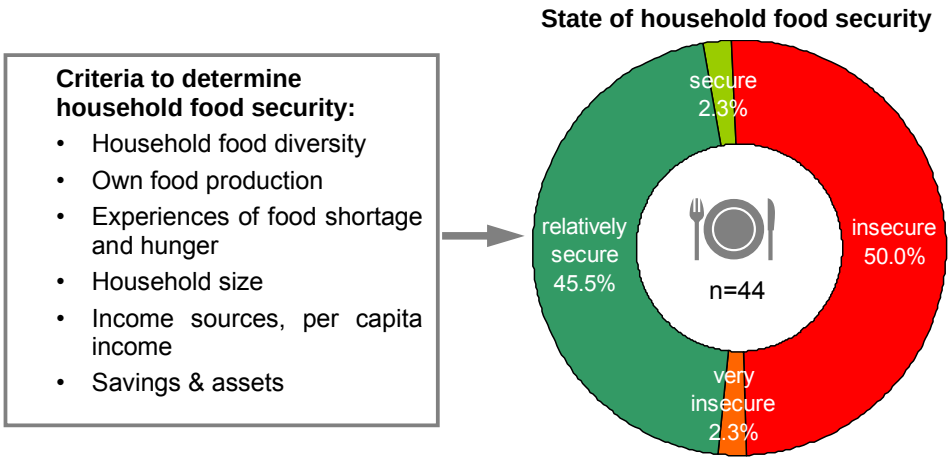


Figure 7.4.3: Food security indicators and distribution of households according to their state of food security

As shown in figure 7.4.3, half of all households are classified as food insecure and one household (2.3%) as very food insecure, while 45.5 percent of the households are classified as relatively food secure and only one household as food secure. In the following, all four food security categories will be described in detail:

- *Very food insecure (2.3% of households, n=1)*

One household of the study sample has been classified in this category. In this household, food is not sufficient either in quantity or quality. The household experiences regular food shortages and times of hunger. Also, food for children is not guaranteed throughout the month. Food diversity is limited to mainly maize meal, tea and sugar. Variations in the diet, like the addition of meat or vegetables, occur seldom. This household is a three-generation household categorised as a single female-headed household. The woman lives with her three children and two grandchildren in the informal settlement. The household draws on three different income sources, a small *tuck shop* income (ZAR 350.0), remittances from a son (ZAR 200.0) and a child support grant (ZAR 250.0). Regular per capita income of ZAR 128.0 is very low. Savings and property outside of the farm area do not exist. The household breeds some chicken but does not grow any plants or vegetables. The following comment illustrates the situation of this household:

> "It happens once or twice per month that I run out of food".

- *Food insecure (50.0% of households, n=22)*

Households classified in this category have basic foods, mainly *mealie meal* and vegetables, like potatoes and onions, available throughout the month. Dietary diversity is limited and meat and other vegetables are seldom consumed in most households.

On average, households have four to five food items available. Most households have worries about food for the next day (81.8%) and the majority of households have problems obtaining food mainly because of limited financial means (86.4%). More than half of the households occasionally run out of food (54.5%) and more than two thirds of households fear not to have enough food for their children (70.6%). On average households have two income sources and the regular per capita income of ZAR 387.6 is very low. Household size is moderate with an average of four people living in one house. Some households obtain additional food from livestock (40.9%) or vegetable gardens (22.7%). The following comments illustrate the situation:

> "When you don't have money, there is no way you can buy the food that you want".
>
> "I do worry about not having fruits, vegetables and meat. When it is finished, then we don't have any money to buy it".

- *Relatively food secure (45.5% of households, n=20)*

In this category, some households express worries about food for the next day (45.0%) which is mostly related to limited access to meat, fresh and processed foods. None of the households experience hunger and the majority do not have any food shortages (90.0%). Basic food is supplied throughout the month and on average seven food items are available in these households. A larger dietary diversity exists, even though certain foods like meat, fruit and vegetables are not always available, mainly due to limited access to grocery stores. In this respect, 25.0 percent of households worry that their children sometimes do not get enough quality foods like fruit, vegetables and meat. Households have on average two income sources and the average regular per capita income is ZAR 556.3. Household size is relatively small with an average of two to three household members. Some households breed livestock (60.0%) or plant vegetable gardens (45.0%) to obtain additional food sources. The situation of households in this category is illustrated by the following comments:

> "We struggle to buy food like meat, milk and fruits because they are in town and you can't go to town to buy them with such little money, for example when you have only ZAR 10 you can't go and buy the fruits cause the transport is also going to cost you."
>
> "We don't run out of food, at least we remain with some food."
>
> "If kids don't want to eat *pap* and meat, I cook for them rice and potatoes, meat, beetroots."

- *Food secure (2.3% of households, n=1)*

In this category, sufficient food, in terms of both quantity and quality, is always available. A large dietary diversity and variety of foods exist. Food preferences of household members can be fulfilled. Households are not worried about food shortages and times of hunger do not occur. Households obtain a secure regular income and are

able to save money. Regular per capita income is high and only a few household members depend on it. Out of the study sample, only one household is classified into this category, consisting of a woman who lives alone in her house in the informal settlement. Her husband works in a nearby town and regularly remits money to her. She operates a well functioning *tuck shop* business and sells self-tailored clothing. She has an income of approximately ZAR 6,000 per month. She is further engaged in a burial society and a *stokvel*. She has bank account savings and possesses two properties outside of the farm. Moreover, she grows vegetables and keeps chicken.

Households cannot always be classified clearly into the different categories of food security. Boundaries are often fluid and the household may move from one category into another under certain circumstances. If, for example, high expenditure occurs unexpectedly, households that are normally food secure might move into a food insecure situation. This is illustrated in the following comment:

> "Last month, we had a funeral of our child, so we had to provide food for more people. That is why we ran out of food. Normally we don't run out of mealie meal but because of the funeral, we did."

The research reveals that the majority of households are either classified as 'relatively food secure' or 'food insecure'. There are only two cases where households have been categorised as 'food secure' or as 'very food insecure'. For simplification, in the following chapters, these two cases will be included into the two main food security categories, 'relatively food secure' and 'food insecure', respectively.

As illustrated in figure 7.4.4, categories of food security differ according to farm setting. While the majority of households in Ouplaas and Vlakteplaas are classified as food insecure (57.1% and 62.5%, respectively), relatively food secure and food insecure households are equally represented in Koppiesplaas. Only in the informal settlement, the majority of interviewed households are classified as relatively food secure (66.6%). This, however, needs to be regarded with caution since data collection in the informal settlement is based on snowball sampling, not giving a representative picture of the setting.

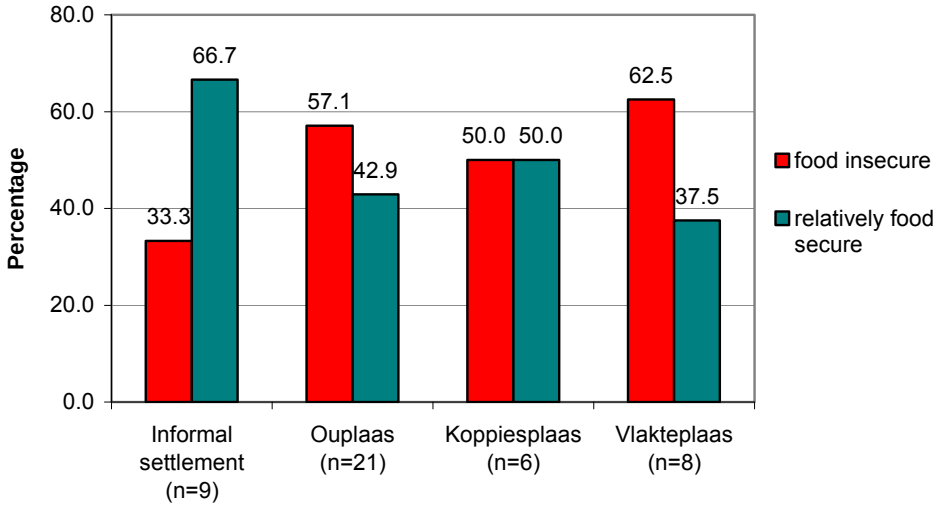


Figure 7.4.4: The state of household food security according to setting

figure 7.4.5 shows that the state of household food security differs between the different household categories. Almost two thirds of conjugal households (62.5%) are classified as food insecure and only 37.5 percent are relatively food secure. Conversely, the majority of female-headed households (66.7%) are classified as relatively food secure. Male-headed households are equally distributed in both categories. Although a tendency of food insecurity in the majority of conjugal households and relative food security in most female-headed household can be observed, differences between the different household categories are not significant ($\chi^2(2)=2.75$; $p=0.253$).

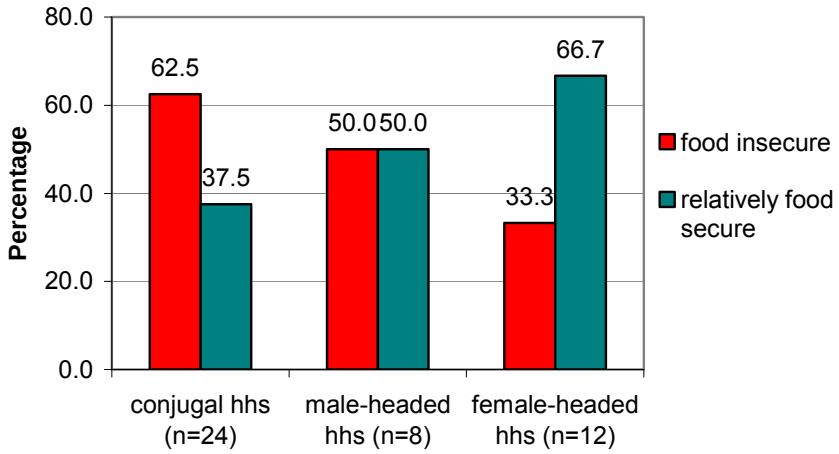


Figure 7.4.5: State of food security according to household category

The main characteristics of the two categories of household food security are summarised in Table 7.4.2. It becomes clear that there are some significant differences between the two categories. The number of income earners in food insecure households (2.1 persons) is significantly higher than in relatively food secure households (1.5 persons). However, the mean per capita income with ZAR 376.3 is far less compared to relatively food secure households with ZAR 815.6. Moreover, food insecure households have significantly less food available in their houses (mean 4.5) compared to relatively food secure households (mean 7.1). Although not significant, more relatively food secure households tend to keep livestock (61.9%) and grow vegetables (47.6%) than food insecure households (43.5% and 21.7%, respectively).

Table 7.4.2 shows that significantly more food insecure households experience food shortages or hunger and worry about food in general and about not having enough food for their kids (56.5%, 82.6% and 72.2%, respectively) compared to relatively food secure households (9.5%, 47.6% and 23.1%, respectively). Nevertheless, the majority of both relatively food secure and food insecure households experience problems in obtaining food (76.2% and 87.0%, respectively), revealing the dire infrastructural situation in the farm areas.

Table 7.4.2: Characteristics of the main food security categories

	Food insecure (n=23)	Relatively food secure (n=21)	p statistics
Mean household size (Std.dev.)	2.4 (0.9)	1.8 (0.6)	U=164.00; p=0.064
Mean number of income earners per household (Std.dev.)	2.1 (1.0)	1.5 (0.6)	U=147.00; **p=0.016**
Mean number of income sources per household (Std.dev.)	2.7 (1.3)	2.3 (1.0)	U=203.00; p=0.347
Mean regular per capita income in ZAR; without seasonal work income (Std.dev.)	376.3 (263.7)	815.6 (1240.1)	U=140.00; **p=0.017**
Mean number of food items available in house (Std.dev.)	4.5 (2.9)	7.1 (3.0)	U=120.00; **p=0.004**
% of households owning livestock	43.5	61.9	$\chi^2(1)=1.49$; p=0.222
% of households planting vegetables	21.7	47.6	$\chi^2(1)=3.27$; p=0.070
% of households experiencing problems obtaining food	87.0	76.2	$\chi^2(1)=0.85$; p=0.355
% of households worried about food	82.6	47.6	$\chi^2(1)=5.98$; **p=0.014**
% of households worrying about food for their children (n=31)*	72.2	23.1	$\chi^2(1)=7.30$; **p=0.007**
% of households experiencing hunger or food shortages	56.5	9.5	$\chi^2(1)=10.79$; **p=0.001**

*among all households with children, 18 are classified as food insecure and 13 are classified as relatively food secure

7.5 Intra-household dynamics and gender relations

In this section, gender relations and intra-household dynamics of farm dweller households will be described more in-depth. The chapter begins to describe relationship attributes, such as duration of the relationship and marital status, and general perceptions regarding marriage, revealing strong differences between men and women's perceptions. The subsequent chapters describe resource allocation and decision-making processes within farm households. Thereafter, emotional and caring support between partners will be examined, drawing on features like the discussion of important matters, asking for advice and care during illness. Finally, the impact of gender relations on household food and livelihood security will be illustrated.

7.5.1 Duration of relationships and perceptions regarding the marital status

Out of the total study sample, 46.4 percent of men (n=32) and 34.8 percent of women (n=24) stated to be in a relationship. The mean duration of relationships reported by men and women is 15.4 (Std. dev. 12.2) and 15.0 (Std. dev. 11.2) years, respectively, showing that most interviewees are in long term relationships.

In 18 households, both partners were asked about their marital status. When comparing the answers it becomes obvious that men and women have different perceptions regarding their relationships. As can be seen in table 7.5.1, there is only a slight agreement between partners (κ = 0.34) with a percentage agreement (PA) of 56.6 percent (methodological background see chapter 5.6.2). Most women (55.6%) in these 18 households define their relationship as a partnership while the majority of men (72.2%) reported to be married by customary law.

Table 7.5.1: Comparison of perceptions regarding marital status of both partners in 18 households

	Women's perspective		**Men's perspective**	
	n	%	n	%
Partnership	**10**	**55.6**	2	11.1
Customary marriage	6	33.3	**13**	**72.2**
Legal marriage	2	11.1	3	16.7
Total	18	100.00	18	100.00
Level of agreement	κ = 0.34 PA = 55.6%			

Generally, perceptions regarding marriage differ between male and female farm dwellers. All interviewees (n=68) were asked their opinion on why people no longer get married. In **men's opinion,** people do not get married because (multiple responses, % of respondents, n=37):

- men don't have money for *lobola* arrangements (45.9%)
- people are not interested in marriage, they want their freedom (27.0%)
- people don't follow traditions anymore (church/culture) (18.9%)
- lack of trust and loyalty between partners (16.2%)
- women don't want to get married (10.8%)
- men don't want to marry (8.1%)
- men fear to lose property after divorce (8.1%)
- money is spent for drinking, not for saving for marriage (5.4%)
- women who are poor accept living in partnerships without marriage (5.4%)
- don't know (5.4%)
- not in possession of identification documents (2.7%).

Women stated the following reasons why people do not get married anymore (multiple responses, % of respondents, n=31):

- women are afraid to be controlled and abused when they are married (38.7%)
- people are not interested in marriage, they want their freedom (32.3%)
- men don't have money for *lobola* arrangements (25.8%)
- women don't want to get married (12.9%)
- don't know (9.7%)
- men don't want to marry (6.5%)
- people don't follow traditions anymore (church/culture) (6.5%)
- men fear to lose property after divorce (3.2%).

It is clearly noticeable that the main reason for women not to get married is their fear to be controlled and abused by their husbands as well as to lose their independence once they are married. Moreover, women also understand the lack of financial means among men and thus their inability to pay *lobola*.

The following quote of a female farm dweller further exemplifies women's perceptions regarding marriage:

> "In general, it is better not to stay with a man. Most man will not treat their woman right. And if you have a good man, he gets to a woman who is just using him. In

these days, it is not good to marry. Also men don't want to marry anymore. When a woman will ask a man why they don't marry, he will run away to another woman. It also happens very often that men have other women besides their wives". *She was shaking her head.* "I don't understand it. How can you as a woman have a man who has a wife? How can you hurt somebody's [the wife's] feelings so much? Nowadays, it is better for women to stay alone with their kids. So they can work for themselves and their kids. Stay and work for yourself and your kids, then you can survive! Getting married is dangerous because man will start to be rude to you and hit you".

7.5.2 Resource allocation between partners

During the structured face-to-face interview, farm dwellers who are in a relationship (n=50[23]) were asked if and how much of their income they share with their partners. As shown in table 7.5.2, almost all men (96.7%) stated to share their income with their female partners. In contrast, only about a third of all women (35.0%) stated that they give a share of their income to their partners. However, the majority of men (83.3%) and women (75.0%) reported that the use of their money is discussed with their partners even though the money might not be directly shared.

When looking into the level of money shared with the partner, it becomes clear that men give higher proportions of their money to their partners (ZAR 603.7), compared to women who give on average only ZAR 55.8 to their partners (see table 7.5.2). The percentage of the shared income reflects the same pattern, with men giving on average 72.8 percent of their income to their partners, while women give only 9.1 percent.

Table 7.5.2: Income allocation between partners

	Men (n=30*)	**Women** (n=20*)
% of interviewees sharing their income with their partner	96.7	35.0
	$\chi^2(1)=22.64$; $p<0.001$	
% of interviewees discussing the use of money with their partner	83.3	75.0
	$\chi^2(1)=0.44$; $p=0.509$	
Level of shared money		
N	27	6
Mean (in ZAR)	**603.7**	**55.8**
Std. dev.	310.0	71.9
Min; max (in ZAR)	150; 1530	10; 200
% of shared money from income	72.8	9.1

* Two men and four women did not respond the questions regarding income allocation in the household.

[23] Six interviewees did not respond the questions regarding income allocation within the household.

It was discovered that income allocation within the household follows a clear pattern. In most cases, male farm workers give a large part of their income to their partners and keep a small amount as pocket money for their own needs. The reasons for men sharing a greater proportion of their incomes are higher income levels and regular incomes due to their farm employment (see chapter 7.2.2). Further, women are the ones who are responsible for household purchases (see chapter 7.5.3) and, hence, are the ones who pool the money. Women contribute their money to the household but usually they do not give cash directly to their male partners.

Most women (55.6%) and men (66.7%) do not know the exact level of income of their partners. However, partners in most households clearly agree on income allocation and discuss how to spend it. This was revealed when comparing the agreement of answers of both partners in 18 conjugal households (fully corresponding contingency tables are displayed in appendix 9). As can be seen in table 7.5.3, particularly the share of men's income given to women has a high level of agreement between partners, having a PA of 94.4% and a very good agreement of the κ score (κ = 0.82). Here, the contingency table shows that in the majority of households (77.8%) both partners agree that men give a share of their income to women (see appendix 9, table A). Table 7.5.3 further reveals a moderate agreement (κ = 0.40) and a PA of 72.2 percent with regard to women's share of income given to their men. The respective contingency table shows that in half of the households, men and women agree that women do not share their income with their partner (see appendix 9, table B). Discussions regarding spending of men and women's income also have moderate levels of agreement with a PA of 84.6 percent and 73.3 percent, respectively, and κ scores of 0.58 and 0.44, respectively (see table 7.5.3). In this regard, the respective contingency tables show that in most households, men and women agree that they discuss the usage of their income (69.2% and 46.7% of households, respectively) (see appendix 9, tables C and D).

Table 7.5.3: Percentage of agreement and Kappa scores regarding financial agreements between partners in 18 conjugal households

	Percentage of agreement (in %)	κ score	Interpretative level of agreement
Men gives share of his income to his partner	94.4	0.82	high
Woman gives share of her income to her partner	72.2	0.40	moderate
Discussions regarding the use of woman's income	73.3	0.44	moderate
Discussions regarding the use of man's income	84.6	0.58	moderate

7.5.3 Decision-making power in the household

To reveal decision-making processes and power dynamics within households, farm dwellers were asked who makes the decisions regarding small and large purchases, future plans, family planning, children's education and giving support to persons in need. Results are summarised in table 7.5.4 (numbers of interviewees alter because not all have responded to each question):

Table 7.5.4: Decision-making in the household from men's and women's perspective

(% per column)	**Men's perspective**	**Women's perspective**	Significance value
Small purchases	(n=32)	(n=23)	
Man	18.8	4.3	$\chi^2(2)=6.98$;
Woman	**53.1**	**87.0**	**p=0.030**
Both	28.1	8.7	
Large purchases	(n=32)	(n=23)	
Man	18.8	4.3	$\chi^2(2)=4.32$;
Woman	21.9	43.5	p=0.115
Both	**59.4**	**52.2**	
Future plans	(n=32)	(n=23)	
Man	**46.9**	**39.1**	$\chi^2(2)=289$;
Woman	6.3	21.7	p=0.236
Both	**46.9**	**39.1**	
Family planning	(n=30)	(n=23)	
Man	13.3	8.7	$\chi^2(2)=6.31$;
Woman	10.0	39.1	**p=0.043**
Both	**76.7**	**52.2**	
Children's education	(n=29)	(n=21)	
Man	17.2	4.5	$\chi^2(2)=6.08$;
Woman	13.8	40.9	**p=0.048**
Both	**69.0**	**50.0**	
Supporting someone	(n=32)	(n=22)	
Man	9.4	12.6	$\chi^2(2)=8.55$;
Woman	9.4	40.9	**p=0.014**
Both	**81.3**	**45.5**	

With respect to decisions about small purchases, such as grocery shopping, the majority of men (53.1%) and women (87.0%) report that these decisions are made solely by the woman in the household (see table 7.5.4). With regard to decisions about large purchases, family planning, children's education and supporting someone, the majority of male and female farm dwellers state that decisions are made by both partners. Decisions regarding future plans show a slightly different pattern. Here, besides joint decision-making, many men (46.9%) and women (39.1%) also reported that decisions are taken by men alone. It is further noticeable in table 7.5.4 that perceptions regarding household decision-making differ significantly between men and women. In all of the decision-making processes, women regard their own decision-making power as much stronger than their male counterparts.

Different perceptions of men and women regarding household decision-making were further analysed comparing answers of men and women who live in the same household (n=18). Percentage agreement (PA) and kappa scores (κ) regarding the different decisions are summarised in table 7.5.5. Appendix 10 provides the fully corresponding contingency tables. A slight agreement (κ = 0.21) between partners living in the same household is only found with regard to decisions about small purchases. Here, men and women in 61.1 percent of households agreed with their answers (see appendix 10, table E). In all other decision-making processes, the agreement between partners is lower than 50 percent and κ scores are below 0.05 indicating a very low agreement to no agreement at all (see appendix 10, table F-J).

Table 7.5.5: Percentage of agreement and Kappa scores regarding household decision-making of men and women in 18 conjugal households

	Percentage of agreement (in %)	κ score	Interpretative level of agreement
Small purchases	61.1	0.21	slight
Large purchases	50.0	0.05	very low
Future plans	27.8	-	-
Family planning	43.8	-0.06	none
Children's education	50.0	-0.07	none
Supporting someone	50.0	0.05	none

To determine who is the main decision-maker in the household, the involvement of men and women in the above mentioned decision-making processes was accumulated. Figure 7.5.1 illustrates the different perceptions regarding the main decision-maker from men's and women's perspective.

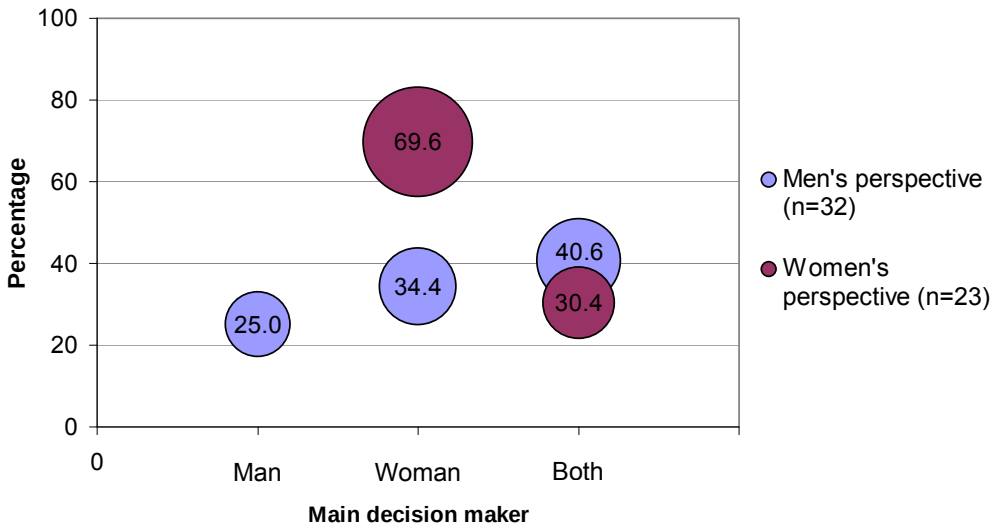


Figure 7.5.1: Main decision-maker in the household from men's and women's perspective (in %)

From the women's point of view, women themselves are involved in more decision-making processes than men and, thus, are the main decision-makers in the household (69.6%). A third of women (30.4 percent) believe that both partners are equally involved in the decision-making process and none claim their partner to be the main decision-maker. On the contrary, men have a totally different perception regarding the main decision-maker. As can be seen in figure 7.5.1, most men (40.6%) claim that decisions are made by both partners equally. One third (34.4%) state that their female partner decides about most household matters and, hence, is the main decision-maker. Only 25.0 percent of men declare themselves as main decision-maker.

When comparing the different perceptions regarding main decision-maker, it is noticeable that women's involvement in decision-making processes tends to influence household food security. As shown in table 7.5.6, there are significant differences between household food security and main decision-maker from the women's perspective ($\chi^2(1)=5.73$; $p=0.017$). In food insecure households, more than half of the women (58.3%) claim that decisions are taken by both partners equally. In all relatively food secure households, women make more decisions than their partner and, thus, seem to be the main decision-maker. When looking at men's perceptions regarding who is the main decision-maker (see table 7.5.6), no significant differences can be found regarding the state of household food security ($\chi^2(2)=3.60$; $p=0.165$). Nevertheless, in the majority of food insecure households, men state that either both partners make decisions jointly (50.0%) or decisions are taken predominantly by men (33.3%). In relatively food secure household, women's involvement is more visible, with men stating that decisions are either taken jointly (50.0%) or predominantly by women (50.0%). Taking these tendencies into account, it can be assumed that women's power

in household decision-making processes is positively linked with household food security.

Table 7.5.6: Household decision-making power from men' and women's perspective and household food security in 18 conjugal households

	(% per column)	**Food insecure households (n=12)**	**Relatively food secure households (n=6)**	Significance value
Women's perspective	Main decision-maker:			
	Man	-	-	$\chi^2(1)=5.73$; **p=0.017**
	Woman	41.7	100.0	
	Both	58.3	-	
Men's perspective	Main decision-maker:			
	Man	33.3	-	$\chi^2(2)=3.60$; p=0.165
	Woman	16.7	50.0	
	Both	50.0	50.0	

7.5.4 Emotional and caring support between partners

Emotional and caring support between partners was assessed within the structured face-to-face interview, adopting questions from SCHWEIZER, SCHNEGG and BERZBORN (1998). Fifty six farm dwellers who are in a relationship where asked to whom they would turn to discuss important matters, whom they would ask for advice and who cares for them during short and longer periods of illness. This chapter concentrates on support relationships between partners only. A more detailed description of these and other forms of support relationships will be given in chapter 7.6.6.

As displayed in figure 7.5.2, emotional and caring support does not seem to be very strong between partners. Only about every third man (34.4%) and woman (29.2%) discuss important matters with their partners. While many women (41.7%) rely on their partners when seeking advice, most men (81.3%) rely on their women for care during short illness. When interviewees become very ill for longer periods, only 34.4 percent of men and 12.5 percent of women rely on their partner's care.

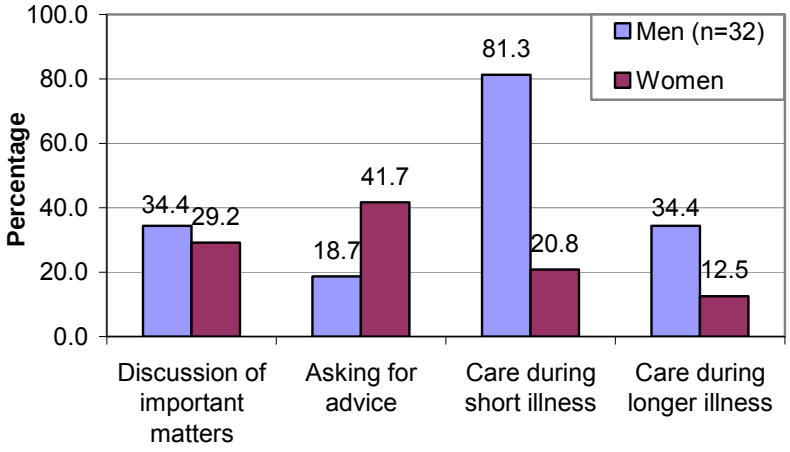


Figure 7.5.2: Emotional and caring support between partners according to gender (in %)

7.5.5 Impact of gender relations on household food and livelihood security

Gender relations in conjugal households on the three investigated farms are characterised by women's dependency on their male partner. Women not only rely on their male partner for income, but also for housing, food provisions and other benefits from the farm owner (see chapter 7.2.6). In other words, most women only have access to these resources through their male partners. As a result, intra-household dynamics strongly determine how well resources are used to secure adequate nutriton and livelihoods.

The qualitative analysis of structured open-ended interviews, informal conversational interviews, focus group discussions and observations revealed several intra-relationship attributes that influence household food and livelihood security. As illustrated in a hypothetical example in figure 7.5.3, a cooperative relationship between two partners can positively influence household food and livelihood security. When both partners share their resources, make joint decisions, support each other and have mutual understanding and trust, both can use the resources available such as income, food and other provisions to secure their family's nutrition and livelihood.

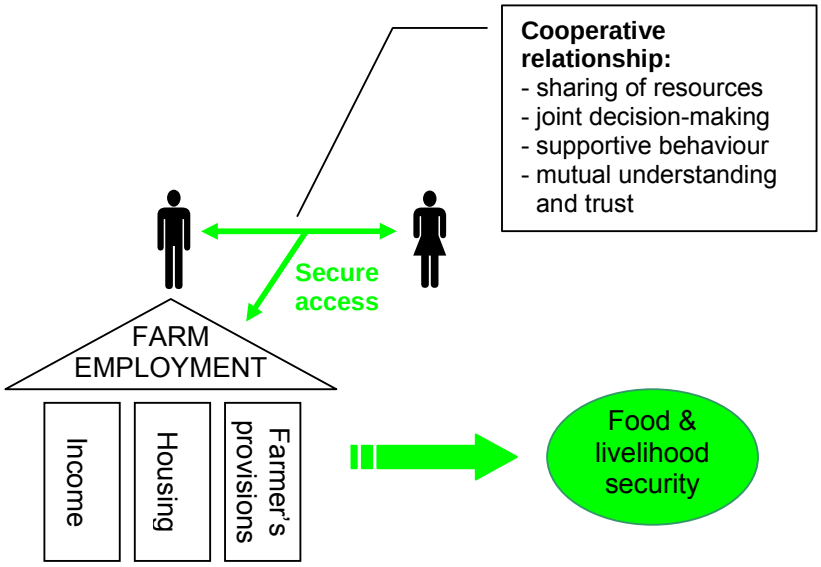


Figure 7.5.3: Hypothetical example of positive effects of a cooperative relationship on household food and livelihood security

During focus group discussions and qualitative interviews, women described their relationships as follows:

> "In a normal year, men and women have a good relationship towards themselves, getting along fine".
>
> "Everything is good between me and my man because he always brings money home and when he made a debt, he discusses it with me and he is not being useless about the money".
>
> "1997 was a good year for me. That was the year when me and my man where always in peaceful terms".
>
> "In the meanwhile, we will search for new jobs. Here, my kids go to school and therefore we cannot move far away because kids should stay at that school. My husband and I agreed together on what we are going to do".
>
> "My husband is helping me a lot. When he comes to my house and he earned money, he also buys stock for me [and my tuck shop]".

On the contrary, a less-cooperative relationship might have significant negative effects on the household's food and livelihood security, as illustrated in the hypothetical example in figure 7.5.4. In less-cooperative relationships, partners may not share resources or support each other, women might highly depend on their partner and do not have strong decision-making power, and there may be conflicts between partners. Alcohol abuse and multiple relationships might further worsen the situation. Under

these circumstances, women in particular are unable to sufficiently use the financial and material resources available to secure the family's nutrition and livelihoods.

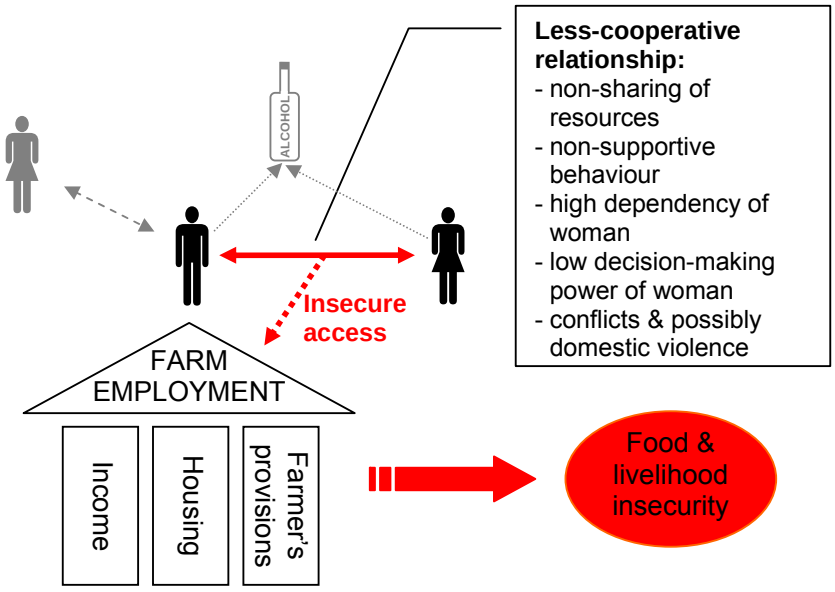


Figure 7.5.4: Hypothetical example of negative effects of a less-cooperative relationship on household food and livelihood security

Less-cooperative relationships have been described by women during focus group discussions and qualitative interviews. Conflicts about money and multiple relationships of men were reported by women when discussing problems within the household:

> "I never had a good life because my man always eats [wastes] money and in a useless way".

> "[…] has been a bad year because of the issue of money and men who have affairs outside. My relationship with my man is not good at all because we always fight all the time".

> "Man use all their money to go out and drink alcohol and kids go to school with bare feet, and they are really struggling because our men do not listen to us and it is getting worse each and every day".

> "Some men around here give their mistresses money and do not think of their own children".

> "And some of the men have affairs in this same farm because every weekend they are not at home, especially on Saturdays. […] In December, [men] get two envelopes of money for bonuses but the other envelope can even go to the other lady".

> "I heard from another lady that he [my husband] has another girlfriend who lives in the informal settlement. He told me that he wants to move out. He is acting very strange. I think he is giving money to the other lady and not me but he always eats the food that I buy from my money. Last week we argued and we said that we want to get divorced from each other".
>
> "It is common that the men living here would just go to other ladies when their girlfriends are sleeping".

Informal chats also revealed that women may also have multiple relationships, particularly under the influence of alcohol.

Cases of domestic violence were also raised when talking to women during focus group discussions and qualitative interviews:

> "Your husband will beat you up or even shoot you if you do not behave the way he wants it. It is better to stay single".
>
> "When men beat you up, there is no one to help you".

The strong dependency of women on their partners is especially apparent when men break up the relationship. When this happens, women lose the base of their livelihoods and their homes. In most cases, they also lose the right to reside on the farm and thus they are compelled to leave and start a new life somewhere else.

The case study in box 7.5.1 describes the case of Nomsa who loses her home after breaking up with her boyfriend.

> Nomsa has been living with her boyfriend Thabiso since we have started our field research three years ago. While still in the relationship with Nomsa, Thabiso met a new girl and cheated on Nomsa. In June 2007, Thabiso finally decided to let the new girlfriend move in with him. Consequently, he broke up with Nomsa and she had to move out of the house.
>
> Having no other place to go, Nomsa's neighbour and friend Refilwe offered her to stay temporarily with her until she has found a new home. Refilwe already had limited space in her house, having only two bedrooms for herself, her husband and three children.
>
> After one week, Nomsa left the farm for good. There was no indication where she moved to.

Box 7.5.1: Case study Nomsa: Losing home after break up of relationship

Focus group discussions with men revealed men's perceptions regarding intra-household dynamics. Men report that most arguments with their partners are about money issues because the salaries of men and women are unequal, as reflected in the following quote:

> "The problem at home can be the money because women and men don't get the same amount of money. If the woman gets more money than her partner, then it is not a problem because they can negotiate this. Sometimes men give all their money to the women but money can be used for something else. If I get paid 500, the wife will know about it and this should change".

7.6 The role of social support networks in the household food and livelihood security system of farm dwellers

This chapter provides a detailed description of farm dwellers' social networks and the role of these in their livelihoods, including food security aspects. The methodology applied in this chapter is largely inspired by the work of SCHWEIZER, SCHNEGG and BERZBORN (1998) and SCHNEGG and LANG (2002).

This chapter starts with a description of network characteristics such as network sizes, characteristics of network actors and the location of network ties. Thereafter, a qualitative description will reveal the different support roles of kin and non-kin actors within the networks of farm dwellers. This is followed by a detailed analysis of actual and potential support relationships. Actual support relationships tend to be those that exist during the everyday life of farm dwellers. On the other hand, the determination of potential support relationships is based on hypothetical questions asking to whom farm dwellers would turn to in times of need (e.g. 'Suppose you need…'). Following this, the multiplexity of network ties will be portrayed and a description of certain characteristics of farm dwellers which influence their network size and formation will be given. The chapter ends with insights into complete networks of farm dwellers, using network graphs to illustrate specific network characteristics according to gender and food security categories of actors.

7.6.1 Network size of interviewees

During the structured face-to-face interviews, all interviewees (termed egos) were asked to name the persons (termed alters) to whom they have actual and/or potential support relations. The number of alters per ego determines the network size of support relations. Table 7.6.1 summarises the network size of the study sample, including the number of alters living in the same house, on the same farm or outside the farm. The total number of alters of all 69 interviewed farm dwellers is 721. Male (n=37) and female (n=32) farm dwellers have 364 and 357 alters in total, respectively. On average, egos have one alter who lives in the same house such as a spouse or a close family member. Egos also have on average five alters who live on the same farm and four alters who live outside the farm. The mean total number of alters per ego is ten. Significant gender differences in network size do not occur, although women tend to have a slightly higher number of alters than men.

Table 7.6.1: Network size of interviewees

	Male egos (n=37)	Female egos (n=32)	All egos (n=69)
Total number of alters	364	357	**721**
Alters living in the same house			
mean	1.0	1.2	**1.1**
std.dev.	0.9	1.0	**0.9**
min; max	0; 3	0; 4	**0; 4**
	U=558.50; p=0.662		
Alters living on farm (excluding household members)			
mean	4.6	5.3	**4.9**
std.dev.	2.1	3.7	**2.9**
min; max	1; 9	1; 20	**1; 20**
	U=584.00; p=0.923		
Alters living outside farm			
mean	4.1	4.7	**4.4**
std.dev.	2.9	2.4	**2.7**
min; max	0; 13	0; 11	**0; 13**
	U=452.00; p=0.089		
All alters			
mean	9.8	11.2	**10.4**
std.dev.	3.3	5.1	**4.3**
min; max	4; 22	5; 31	**4; 31**
	U=503.50; p=0.284		

The distribution of different network sizes is illustrated in figure 7.6.1. More than half of farm dwellers have a medium network size from six to ten alters (52.2%). This is followed by 30.4 percent of farm dwellers having a large network size, counting eleven to 15 alters. Small, extra large and extremely large network sizes are rare (8.7%, 5.8% and 2.9%, respectively).

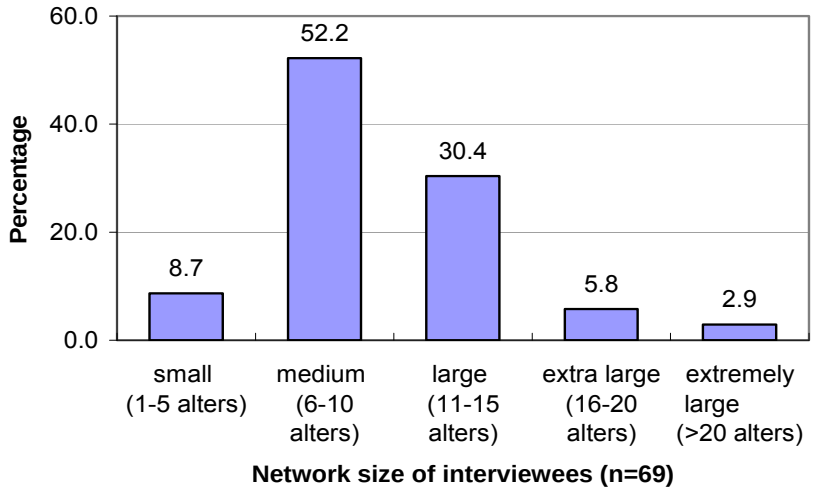


Figure 7.6.1: Distribution of network sizes (in %)

Certain characteristics of the ego can influence the network size and number of alters with specific support roles. Table 7.6.2 summarises the p-values of the comparison of ego's characteristics and ego's mean network size. Appendix 11 provides the full corresponding contingency tables. It becomes apparent that the network size is not significantly influenced by ego's place of birth, length of stay on the farm, income level and household category. However, significant differences in the network size occur between ego's place of residence, age group and household food security categories.

Table 7.6.2: Summary of p-values of the comparison of egos' characteristics and ego's mean network size (number of alters per ego)

Ego's characteristics	p-values Network sizes Number of alters on farm	Number of alters outside farm	Number of all alters
Place of residence	**0.010**	0.126	0.847
Age	**0.020**	0.977	0.362
Distance to place of birth	0.184	0.227	0.915
Length of stay on farm	0.814	0.917	0.853
Level of income	0.593	0.804	0.897
Household category	0.662	0.485	0.594
Level of food security	0.097	0.768	**0.035**

The comparison of ego's place of residence and ego's network size (see appendix 11) reveals that farm dwellers living in Ouplaas and the informal settlement have a significantly higher number of alters living within the same area (mean 5.7 and 5.4, respectively) compared to farm dwellers living in Vlakteplaas and Koppiesplaas (mean 3.7 and 3.4, respectively). However, the total number of alters (on and outside the farm) does not differ significantly.

The age of egos also influences network sizes within the same farm area (see appendix 11). Farm dwellers aged older than 60 years have less alters on farm (mean 3.2) than farm dwellers aged from 20 to 40 years (mean 5.4) and 41 to 60 years (mean 5.3). However, network sizes outside the farm and the total number of alters does not significantly vary between the different age groups.

With regard to food security, appendix 11 illustrates that egos living in food insecure households have slightly more alters in their network (mean 11.1) than egos living in relatively food secure households (mean 9.8).

7.6.2 Characteristics of alters: Gender, age, economic status, relationship role and emotional bond

Name generators and interpreters which were included in the structured open-ended questionnaire were used to collect data of alters who are connected to the interviewees through either actual or potential support relations (for methodological background see chapter 5.5.1). In this way, specific characteristics of each alter were gained. Table 7.6.3 provides an overview on gender, age and economic status of alters.

Table 7.6.3: Specific characteristics of alters[#] (in %)

Alters' characteristics *(% per column)*	**Alters of male egos**	**Alters of female egos**	**Alters of all egos**
Sex	*(n=356)*	*(n=356)*	***(n=712)***
male	62.9	33.4	**47.6**
female	37.1	66.6	**51.2**
	$\chi^2(1)=62.02$; **p<0.001**		
Age	*(n=207)*	*(n=316)*	***(n=523)***
18-40 years	56.5	57.0	**56.8**
41-60 years	25.1	28.2	**27.0**
> 60 years	18.4	14.9	**16.2**
	$\chi^2(2)=1.37$; p=0.505		
Economic status*	*(n=345)*	*(n=352)*	***(n=697)***
very low ES	19.7	28.4	**24.1**
low ES	60.0	56.3	**58.1**
middle ES	8.1	8.2	**8.2**
high ES	12.2	7.1	**9.6**
	$\chi^2(3)=10.11$; **p=0.018**		

[#] The number of alters varies in this table because in some cases interviewees did not fully specify all characteristics of alters.
* Categorisation of the economic status is displayed in appendix 8.

Table 7.6.3 shows that the gender of all alters is distributed almost equally with 47.6 percent of all alters being male and 51.2 percent being female. Significant differences exist between male and female egos ($\chi^2(1)=62.02$; $p<0.001$). Male egos are mostly connected to male alters (62.9%) and female egos are mainly connected to female alters (66.6%).

Moreover, it can be seen in table 7.6.3 that more than half of all alters (56.8%) are between 18 to 40 years old followed by 27.0 percent of alters being between 41 to 60 years old and 16.2 percent being older than 60 years, showing that support networks are inter-generational.

When looking at the economic status of alters in table 7.6.3, the majority of alters have a very low (24.1%) or low economic status (58.1%), being either formally unemployed or in low income jobs, such as farm workers, domestic workers or seasonal farm workers (see appendix 8). Only a minority of alters have a middle or high economic

status (8.2% and 9.6%, respectively), whereby the high economic status mainly refers to farm owners (77.6%) and shop owners (14.9%). Significant differences between the gender of ego and the economic status of alters exist ($\chi^2(3)=10.11$; p=0.018). Female egos have more alters with a very low economic status (28.4%) than male egos (19.7%). Additionally, more male egos are connected to alters with a high economic status (12.2%), mostly the farm owners, compared to only 7.1 percent of female egos.

Alters are further determined by their relationship role towards egos which is illustrated in table 7.6.4.

Table 7.6.4: Relationship roles of alters towards egos (in %)

Alters' relationship role *(% per column)*	**Alters of male egos (n=364)**	**Alters of female egos (n=357)**	**Alters of all egos (n=721)**
KIN total	**65.7**	**63.6**	**64.6**
Spouse/partner	**8.8**	**6.7**	**7.8**
Close kin	**30.8**	**29.1**	**30.0**
- children	7.4	10.6	9.0
- parents	4.7	6.8	5.7
- siblings	18.7	11.8	15.3
Extended kin	**18.7**	**19.6**	**19.1**
- grandparents	1.0	2.3	1.7
- grandchildren	0.3	0.6	0.4
- aunt/uncle	7.9	6.1	7.1
- cousins	8.0	6.7	7.4
- niece/nephew	1.4	3.9	2.6
Affinal kin (related by marriage)	**7.4**	**8.1**	**7.8**
- parents-in-law	0.8	1.1	0.8
- siblings-in-law	5.2	4.2	4.7
- other in-laws	1.4	2.8	2.0
NON-KIN total	**34.3**	**36.4**	**35.4**
Neighbours*	2.2	9.8	6.0
Friends	18.1	19.1	18.6
Farm owners#	9.1	5.0	7.1
Other§	4.9	2.5	3.7

* Pearson chi-square statistics: $\chi^2(1)=18.59$; p<0.001
# Pearson chi-square statistics: $\chi^2(1)=4.44$; p=0.035
§ The category includes shop owners, social workers, a community chief, church members, housemates and loaners.

As can be seen in table 7.6.4, almost two thirds of alters are kin-related to egos (64.6%). The highest proportion of kin-related alters belongs to close kin (30.0%), such as children, parents and siblings, and to extended kin (19.1%), such as aunts/uncles, cousins, nieces/nephews, grandparents and grandchildren. Table 7.6.4 further illustrates that about one third of alters are not kin-related to their egos. Most prevalent

in this category are friends (18.6%), followed by farm owners (7.1%) and neighbours (6.0%). Significant associations between ego's gender and the relationship role of alters only exist with regard to non-kin alters. While almost ten percent of all support relations of female interviewees are connected to neighbours, this applies to only 2.2 percent of support relations of men ($\chi^2(1)=18.59$; $p<0.001$). Conversely, male interviewees have a higher share of support relations to the farm owner (9.1%) compared to women (5.0%) ($\chi^2(1)=4.44$; $p=0.035$).

To gain a measure of emotional bonds between ego and alters, interviewees were asked to indicate how close they feel towards their alters. Using a closeness scale (see appendix 2), interviewees could express their closeness from '*very close*', '*close*', '*a bit close*' to '*not so close*'. Since it was assumed that relationships towards farm owners, shop owners, social workers, church members and loaners are of a different nature than relationships to relatives, friends and neighbours, the closeness to these persons was not asked. Table 7.6.5 shows different relationship roles of alters and their closeness to egos. Unsurprisingly, the emotional bond to kin-related alters is much stronger than to non-kin ($\chi^2(3)=17.78$; $p<0.001$). Most kin are perceived as *very* close alters (41.3%) whereas most non-kin are perceived as close alters (45.3%). Within the kin group, the majority of egos feel very close to their spouses (90.0%). Emotional bonds to close, extended and affinal kin vary from very close to not so close. In the non-kin group, the majority of friends are perceived to be close (52.7%) while most neighbours are perceived to be a bit close (41.0%). In summary, strong bonds exist primarily between kin, however close relationships do exist between friends too.

Table 7.6.5: Relationship roles of alters and their closeness to ego (in %)

(% per row)		Ego's perceived closeness to alters: very close	close	a bit close	not so close
KIN total	**(n=446)**	**41.3**	**28.9**	**20.4**	**9.4**
spouse/partner	(n=50[#])	90.0	8.0	2.0	0.0
close kin	(n=209)	37.3	33.5	20.6	8.6
extended kin	(n=137)	31.4	30.7	25.5	12.4
affinal kin	(n=50)	36.0	26.0	24.0	14.0
NON-KIN total	**(n=170)**	**27.1**	**45.3**	**21.2**	**6.5**
neighbour	(n=39)	23.1	20.5	41.0	15.4
friend	(n=131)	28.2	52.7	15.3	3.8
		$\chi^2(3)=17.78$; $p<0.001$*			

[#] Out of 56 interviewees who reported to be in a relationship, six did not mention their partners when asked about their social support networks.
* Pearson chi-square statistics of kin/non-kin total groups.

7.6.3 Location of network ties

Persons who provide actual and/or potential support to interviewees live in different places and within different geographical distances, ranging from the same house, other farms, urban areas to neighbouring countries; and from less than one kilometre to up to more than 200 kilometres away. Figure 7.6.2 shows the distribution of alters' place of residence:

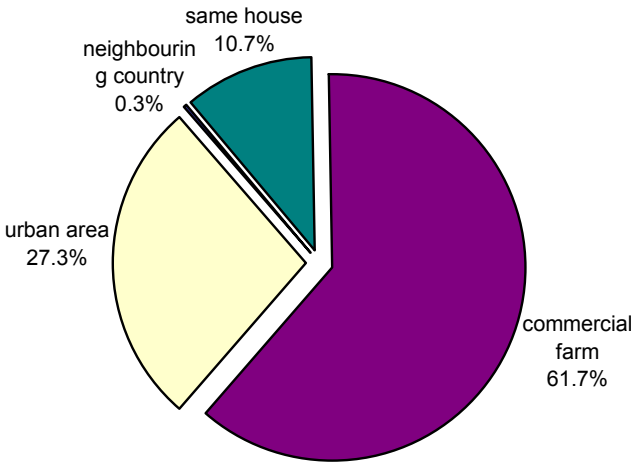


Figure 7.6.2: Place of residence of alters

The figure clearly illustrates that most alters who are connected to interviewees live on commercial farms (61.6%). The proportion of alters living in urban areas is far smaller at only 27.3 percent. Eleven percent of alters, mainly spouses and close family members, live in the same house. Alters who live in neighbouring countries are very rare, with only one foreign male migrant farm worker who is connected to his family in Mozambique.

The distribution of alters according to the geographical distance to their place of residence is shown in figure 7.6.3. It is noticeable that alters' place of residence is concentrated within a relatively small radius, with 58.2 percent of all alters living within a radius of less than one kilometre, followed by 30.8 percent of alters living within less than 50 kilometres. Only eleven percent of alters live further than 50 kilometres away.

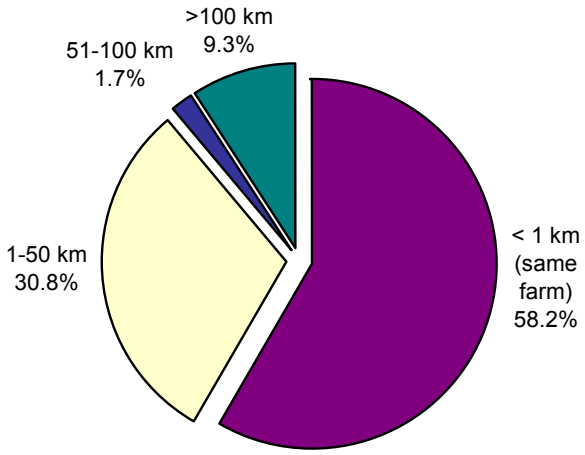


Figure 7.6.3: Geographical distance to alters' place of residence

Significant associations between ego's gender and alters' place of residence ($\chi^2(4)=0.09$; p=0.999) as well as alters' geographical distances ($\chi^2(4)=0.97$; p=0.914) do not exist.

Selected characteristics of alters, such as relationship role, economic status and closeness to egos, are significantly associated with their place of residence, as illustrated in table 7.6.6.

Table 7.6.6: Selected characteristics of alters according to their place of residence (in %)

Alters' characteristics *(% per row)*	**Same house**	**Same farm**	**Another farm**	**Urban area**	**Neighb. Country**
Relationship role					
Kin (n=464)	16.4	27.2	17.5	38.6	0.4
Non-kin (n=255)	0.4	84.3	8.2	7.1	0.0
		$\chi^2(4)=223.27$; p<0.001			
Economic status					
very low (n=167)	15.6	39.5	13.8	29.9	1.2
low (n=405)	12.6	46.4	17.5	23.5	0.0
middle (n=57)	0.0	28.1	5.3	66.7	0.0
high (n=67)	0.0	97.0	1.5	1.5	0.0
		$\chi^2(12)=131.74$; p<0.001			
Closeness to alter					
very close (n=230)	25.2	39.1	11.3	23.5	0.9
close (n=206)	3.9	51.9	18.4	25.7	0.0
a bit close (n=127)	0.8	37.0	11.8	50.4	0.0
not so close (n=53)	3.8	28.3	30.2	37.7	0.0
		$\chi^2(12)=111.40$; p<0.001			

It becomes apparent that most kin-related alters live either in urban areas (38.6%) or on the same farm (27.1%). In contrast, the majority of non-kin relationships are

concentrated on the same farm (84.3%). This includes friends, neighbours as well as farm owners and shop owners.

It has already been shown that the majority of alters in this study sample has a very low (24.2%) or low economic status (58.0%) (see chapter 7.6.2). Additionally, table 7.6.6 shows that the economic status of alters is related to their place of residence. Most alters with very low and low economic status live on the same farm (39.5% and 46.4%, respectively). However, alters that live in urban areas generally have more variety of and better access to income generating activities and, thus, it is not surprising that two thirds of alters with middle economic status live in urban areas. Nevertheless, out of all alters (n=696)[24] the *number* of alters with middle economic status living in urban areas is very low (n=38, 5.5%) compared to the much higher *number* of alters with very low and low economic status in urban areas (n=145, 20.8%). Alters with high economic status living on the same farm are mostly farm owners (77.6%).

Table 7.6.6 further illustrates that egos' perceived closeness to their alters decreases with the distance to their place of residence. While most alters who live in the same house or on the same farm are perceived as very close alters (25.2% and 39.1%, respectively), the majority of alters who are a bit close or not so close to the ego live on another farm (11.8% and 30.2%, respectively) or in urban areas (50.4% and 37.7%, respectively).

7.6.4 A qualitative view of farm dwellers' social support networks: Different support roles between kin and non-kin

Through qualitative analysis of field observations, informal conversations and questionnaires, different support roles of kin and non-kin could be allocated.

Supportive roles of **kin** include the sending of remittances which are often large sums of money (more than ZAR 100.0). These are sent for several reasons, for example male farm dwellers sending money to assist their families who live in towns. Moreover, female relatives, mostly mothers, older sisters or aunts, help with care during pregnancy and longer sickness. It has been observed that pregnant women move to female relatives to receive care and advice in the late stages of pregnancy and assistance during the first months after birth. Farm dwellers might also rely on relatives to foster their children. The ability to send children to relatives in urban areas allows farm children to access high school, increasing their future perspectives. Children may also be sent to relatives on neighbouring farms that are located closer to the primary school to ensure more regular school attendance. Relatives are also called upon to provide temporary accommodation to farm dwellers in need, for example after

[24] The economic status of 25 alters could not be categorised.

retrenchment. General assistance during difficult life stages is almost exclusively provided by relatives. It was observed that relatives would help with building a house, relocating, looking for jobs and giving advice on family problems. Moreover, informal conversations with farm owners revealed that workers would approach them to ask for job openings for their relatives. Farm owners often welcome these approaches because they trust their workers' recommendations.

Supportive roles of **friends and neighbours** in the farm community are more geared towards daily life assistance. Neighbours and friends call the ambulance in emergencies. They watch the house and children when the tenant is temporarily absent, for example when working or doing groceries. People in the community also do certain activities together, for instance walking to the grocery stores or collecting fire wood. Of course, **relatives** living in the farm community also provide these types of support. Furthermore, certain types of support, like visits, assistance with transport and exchange of money and food exist between farm dwellers and their kin and non-kin relations alike.

Another interesting observation was made regarding strategies for a successful *tuck shop* business in the farm area. People will only go to *tuck shops* where they know and like the entrepreneurs. Thus, entrepreneurs heavily rely on relationships within the farm community. The wider their networks are, the more customers they have.

The support roles of kin and non-kin are summarised in figure 7.6.4:

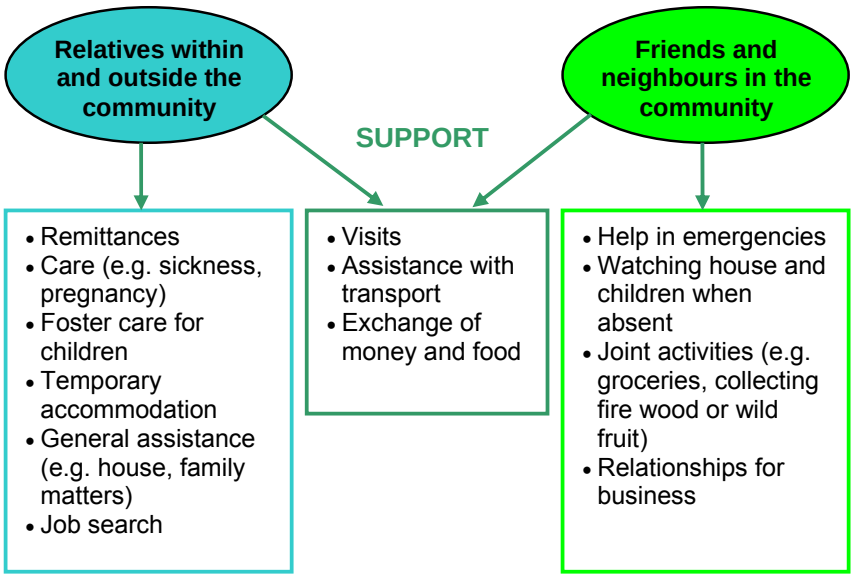


Figure 7.6.4: Different support roles of kin and non-kin relationships

This qualitative analysis gave a broad overview on different support roles of kin and non-kin. These will be further analysed in the following chapters, using network analytical methodologies which focus on specific forms of actual and potential support.

7.6.5 Actual social support: Networks in the everyday life of farm dwellers

During the structured face-to-face interview, data of actual social support relations were collected from 69 farm dwellers. Actual support relations are relationships between ego and alter that involve regular contact. They are considered as relationships which in fact exist and are incorporated in farm dwellers' everyday life. To gain deeper insights into the meaning and use of these actual support relations, interviewees were asked to describe the frequency and mutuality of visits as well as the exchange of food, small goods and money.

Household members were excluded in this category because intra-household relationships are much more complex and differ immensely from relations to other alters. Intra-household dynamics were described in detail in chapter 7.5. It should be noted that farm owners as well as other alters[25] were not mentioned by farm dwellers when discussing actual social support relations.

Figure 7.6.5 illustrates the distribution of different types of actual support within the networks of farm dwellers. The majority of actual support relationships refer to visits (77.1%) between egos and alters, followed by exchange of money (39.3%) and food items (32.9%) and the sharing of meals (24.0%). The exchange of small goods (7.1%) plays only a minor role within actual support networks.

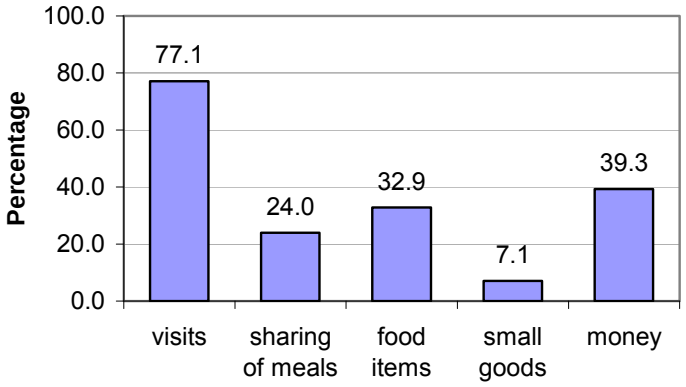


Figure 7.6.5: Distribution of different types of actual support relations (n=721)

[25] The category includes shop owners, social workers, a community chief, church members, housemates and loaners.

Table 7.6.7 provides an overview on the actual support network size, illustrating the mean number of alters who exchange visits, meals, foods, small goods or money with farm dwellers.

Table 7.6.7: Mean number of alters per ego providing different types of actual support*

Types of actual support	Male egos (n=37)	Female egos (n=32)	All egos (n=69)
Visits (n=556)			
mean number of alters per ego	7.2	9.0	**8.06**
std.dev.	3.1	5.3	**4.3**
Min; max	3;18	2;31	**2;31**
	U=465.50; p=0.126		
Sharing meals (n=173)			
mean number of alters per ego	2.7	2.4	**2.5**
std.dev.	1.8	2.3	**2.0**
Min; max	0;6	0;8	**0;8**
	U=501.50; p=0.269		
Exchange food items (n=237)			
mean number of alters per ego	3.7	3.1	**3.4**
std.dev.	2.8	2.1	**2.5**
Min; max	0;11	0;8	**0;11**
	U=521.00; p=0.389		
Small goods (n=51)			
mean number of alters per ego	0.5	1.1	**0.7**
std.dev.	1.7	1.8	**1.5**
Min; max	0;5	0;8	**0;8**
	U=418.50; p=0.012		
Money (n=283)			
mean number of alters per ego	4.7	3.4	**4.1**
std.dev.	3.3	2.9	**3.1**
Min; max	0;13	0;11	**0;13**
	U=452.50; p=0.091		

* Note: The investigation into actual support relationships excludes exchanges between people living in the same house, farm owners and other alters (e.g. shop owner, social worker, loaners).

On average, egos have eight persons with whom they exchange visits. Even though not significant (U=465.50; p=0.126), women have a slightly higher number of visitors (mean 9.0), compared to men (mean 7.2). When visitors come from further away or when egos visit alters who live further away, small goods and food items are often brought along as little gifts. Moreover, sharing meals and drinks during the visits is a matter of good hospitality and, thus, often expected from the visitors.

Table 7.6.7 further displays that there are more alters with whom the ego exchanges food items (mean 3.4), compared to the number of alters with whom they share meals (mean 2.5). Significant differences between male and female egos do not exist.

The mean number of alters with whom egos exchange small goods is very low (mean 0.7). There is a significant difference between male and female egos (U=418.50;

p=0.012). Female egos exchange small goods on average with one person, while men do so with less than one person (mean 0.5).

Money is exchanged on average with four persons. Even though only marginally significant (U=452.50; p=0.091), men share money with more persons (mean 4.7) compared to women (mean 3.4).

Another aspect of actual social support networks is the frequency of visits and money exchange between egos and alters. As can be seen in table 7.6.8, the frequency of visits and money exchange differs significantly with the distance to alters' place of residence. Frequent visits (daily to weekly) take place with alters who live within a radius of less than one kilometre (92.4%). Alters living at a distance between one and 50 kilometres and 51 to 100 kilometres mostly exchange visits regularly (one to three times/month). The majority of alters living more than 100 kilometres away only exchange visits occasionally (three to six times/year) or seldom (one to two times/year) (34.8% and 33.3%, respectively).

Table 7.6.8 further shows that most alters who live within a radius of one kilometre only exchange money occasionally with egos (63.4%), while money is exchanged regularly with 55.8 percent of alters who live at a distance of one to 50 kilometres. With alters who live between 51 to 100 kilometres and more than 100 kilometres away, money is mostly exchanged occasionally (44.4% and 51.6%, respectively).

Table 7.6.8: Frequency of visits and money exchange according to the distance of alters' place of residence*

Distance to alter *(% per row)*	**Frequency of visits** (n=555[#])				**Frequency of money exchange** (n=269[§])			
	fre-quent	regu-larly	occa-sional	seldom	fre-quent	regu-larly	occa-sional	seldom
<1 km	**92.4**	3.8	3.4	0.4	4.5	32.1	**63.4**	0.0
1-50 km	22.8	**57.7**	13.0	6.5	2.1	**55.8**	35.8	6.3
51-100 km	27.3	**36.4**	18.2	18.2	0.0	33.3	**44.4**	22.2
>100 km	6.1	25.8	**34.8**	33.3	0.0	29.0	**51.6**	19.4
χ^2-statistics	$\chi^2(9)=395.74$; p<0.001				$\chi^2(9)=43.91$; p<0.001			

* Note: The investigation into actual support relationships excludes exchanges between people living in the same house, farm owners and other alters (e.g. shop owner, social worker, loaners).
[#] One interviewee did not report the frequency of visits.
[§] Three interviewees did not report the frequency of money exchange.

Out of a total of 721 alters, money is exchanged with 272 persons (37.7%). As can be seen in table 7.6.9, the amount of money exchanged between ego and alter depends on ego's gender, frequency of money exchanges, reciprocity, relationship roles, and alters place of residence. On average, egos and alters exchange ZAR 165.4 per month. While male egos and their alters exchange on average ZAR 187.1, female egos exchange less money with their alters (mean ZAR 132.2 per month). Moreover, the

average amount of money significantly decreases with the frequency of money exchange, with lower amounts (mean ZAR 53.1, calculated per month) for frequent exchange compared to seldom occurring exchanges (mean ZAR 175.7, calculated per month). It was further revealed that the amount of money differs with the reciprocity of money exchange. While lower levels (mean ZAR 125.1 per month) occur when money is mutually exchanged between both persons, the highest amount of money appears in non-reciprocal exchanges from alters to egos (mean ZAR 219.2 per month), predominantly as remittances between family members.

With regard to relationship roles, table 7.6.9 illustrates that money exchanges with kin-related alters are significantly higher (mean ZAR 183.6) compared to non-kin alters (mean ZAR 100.4). Lastly, it was found that egos exchange higher amounts of money with alters who live in urban areas (mean ZAR 247.5) compared to alters who live on the same farm (mean ZAR 118.9) or neighbouring farms (mean ZAR 112.3).

Table 7.6.9: Mean amount of money exchanged between egos and alters*

		Amount of exchanged money (calculated per month in ZAR)			
	n (alters)	Mean	Std. dev.	Min; max	Test of significance
Total alters	272	165.4	215.7	10; 2500	
Alters of male egos	152	187.1	167.0	10; 1000	*U*= 4686.00, p<0.001
Alters of female egos	101	132.8	270.9	10; 2500	
Frequency of exchange					
Frequently (weekly)	8	53.1	40.6	10; 100	
Regularly (monthly)	102	171.9	284.6	10; 2500	*H*(3)=9.00, p=0.029
Occasionally (3-6/year)	122	163.3	164.8	10; 1000	
Seldom (1-2/year)	14	175.7	86.4	10; 300	
Reciprocity					
Mutual	125	125.1	137.5	10; 1000	
Ego gives money to alter	67	192.2	185.3	10; 1000	*H*(2)=10.50, p=0.005
Alter gives money to ego	54	219.2	354.5	10; 2500	
Relationship roles					
Kin	188	183.6	233.8	10; 2500	*U*=3680.50, p<0.001
Non-kin	58	100.4	141.9	10; 1000	
Alters' place of residence					
Same farm	125	118.9	140.4	10; 1000	
Neighbouring farm	33	112.3	122.3	10; 500	*H*(2)=42.22, p<0.001
Urban area	87	247.5	301.1	10; 2500	

* Note: The investigation into money exchange relationships excludes exchanges between people living in the same house, farm owners and other alters (e.g. shop owner, social worker, loaners).

Reciprocity is one of the main features that keep support relationships of farm dwellers alive. However, it does not equally occur in all types of support relationships. As can be

seen in table 7.6.10, the majority of relationships where meals (82.2%) and visits (70.0%) occur are of reciprocal nature, while only about half of all exchanges of food items (50.8%) and money (52.7%) are reciprocal. The reciprocal exchange of small goods is very low with only 18.0 percent. The majority of small goods are exchanged non-reciprocally from alters to egos.

Furthermore, table 7.6.10 displays correlations of reciprocal support relationships with the alter's relationship role and place of residence. Reciprocal exchanges of all actual support relationships correlate significantly with non-kin alters. Moreover, the reciprocal exchange of visits, food items and money correlate significantly with alters who live on commercial farms. Hence, it appears that reciprocity is particularly prevalent in support networks with non-kin alters living on the same commercial farm. Support relationships between kin-related alters and alters who live in urban areas may often appear in directed ways from ego to alter or vice versa, without demanding reciprocity.

Table 7.6.10: Frequency of reciprocity of actual support relationships and correlations with alter's relationship roles and place of residence[#]

Actual support forms		Frequency of reciprocal exchange (in %)	Correlation coefficient of reciprocal exchange relationships	
			Alter's relationship role kin / non-kin	Alter's place of residence farm / town
Visits	(n=556)	70.7	-,199**	,352**
Sharing meals	(n=163)	82.2	-,260**	-,051
Food items	(n=236)	50.8	-,247**	,325**
Small goods	(n=51)	18.0	-,629**	,197
Money	(n=283)	52.7	-,366**	,504**

[#] Note: The investigation into actual support relationships excludes exchanges between people living in the same house, farm owners and other alters (e.g. shop owner, social worker, loaners).

**. Correlation is significant at the 0.01 level (2-tailed).

Comparing different relationship roles of alters and egos, it comes to the fore that certain relationships are linked to certain types of support. As can be seen in table 7.6.11, the majority of support forms, including visits, the exchange of food items, small goods and money, take place between close kin (33.8%, 48.1%, 64.7%, 39.2%, respectively) and extended kin (24.1%, 26.6%, 21.6%, 26.1%, respectively). Nonetheless, a different pattern appears regarding the sharing of meals (with alters other than household members). These meals are mostly shared with friends (32.9%) and extended kin (23.1%). Moreover, partners living at a distance as well as affinal kin play a rather small role within actual social support networks.

Table 7.6.11: Percentage of alters' relationship role regarding different types of actual support*

Types of actual support *(% per row)*	**Distant partner**	**Close kin**	**Exten-ded kin**	**Affinal kin**	**Neigh-bour**	**Friend**
Visits (n=556)	1.6	**33.8**	24.1	9.5	7.2	23.7
Sharing meals (n=173)	-	19.1	23.1	13.3	11.6	**32.9**
Food items (n=237)	2.5	**48.1**	26.6	11.0	1.7	10.1
Small goods (n=51)	2.0	**64.7**	21.6	3.9	2.0	5.9
Money (n=283)	3.5	**39.2**	26.1	8.1	4.2	18.7

* Note: The investigation into actual support relationships excludes exchanges between people living in the same house, farm owners and other alters (e.g. shop owner, social worker, loaners).

More insights into the complex associations between relationship roles and types of actual support are provided by the correspondence analysis (for methodological background see chapter 5.6.3). The results of contingency tables of the two sets of variables with multiple categories are transformed into a two-dimensional scatterplot (see figure 7.6.6). Relationship roles are marked as green stars and types of actual support are marked as blue circles. Distances between the plotted variables display a strong similarity to the frequency profiles.

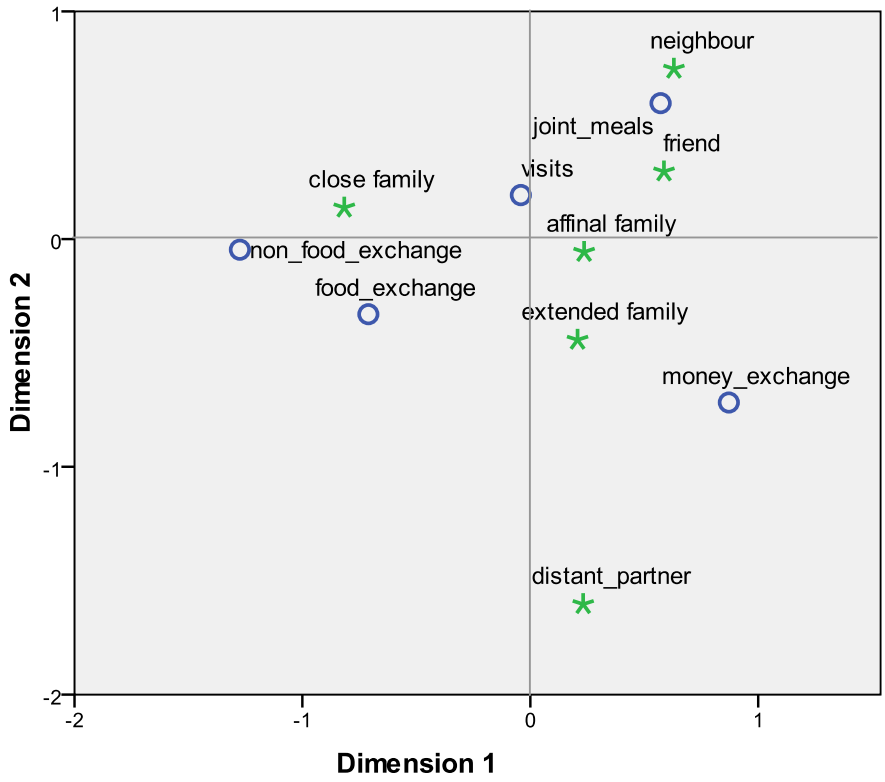


Figure 7.6.6: Relationship roles and type of actual support (correspondences analysis)

The first dimension is displayed on the horizontal axis, capturing 78.1 percent of the variance in the data. As illustrated, there is a clear split between close family members on the left and all other relationship roles on the right, indicating that close family members take a distinct role within farm dwellers' networks. With regard to support roles, it can be seen that non-food and food exchanges, situated on the left, are in close spatial distance to close family members, showing the special role of close family in providing these types of support. On the contrary, money exchange is situated far on the right, representing an opposite pole to food and non-food exchange which illustrates that the exchange of foods and non-food items has a different meaning than the exchange of money. This is particularly important when considering that farm dweller households generally have a lack of money, but most have basic food items available in their houses through food provisions by the farm owner. The support role of visits is centrally located in the plot, showing that visits are neither assigned to certain relationship roles nor form a particularly distinct support role in farm dwellers' actual support relations. In fact, visits are exchanged between most actors, being a necessary prerequisite for the establishment of other support forms.

The second dimension captures 20.1 percent of the variance and is displayed on the vertical axis. Neighbours and friends are located close to each other in the upper right quadrant of the plot, close to the support role of joint meals. Hence, farm dwellers perceive support from friends and neighbours in a similar way, with the sharing of meals being the most common type of support. Partners living at a distance (in female-

or male-headed households) take an outsider position in the lower right quadrant of the plot. They are located very far from other relationship roles in the plot, meaning that their support role differs very much from alters like close family or friends and neighbours. Also in this lower right section, one can find the extended family as well as the support role of money exchange. Therefore, partners living at a distance as well as extended family members are mostly involved in money exchange. Affinal family is situated very close to the centre of the plot, depicting that they are not assigned to a certain support form.

Confirming the results from the correspondence analysis, table 7.6.12 summarises the correlations of characteristics of alters with different types of actual support.

Table 7.6.12: Correlation of actual social support[#] forms with alters' characteristics (bivariate pearson correlation)

Alter characteristics	Visits n=556	Sharing meals n=173	Exchange of food items n=237	Exchange of small goods n=51	Exchange of money n=283
Gender male / female	-,049	,059	,081	**-,126****	**,137****
Relationship role kin / non-kin	-,028	**-,198****	**,358****	**,159****	**,172****
Place of residence farm /town	-,031	**,484****	**-,351****	**-,247****	-,035
Economic status					
very low ES	-,073	-,028	,020	-,004	-,103*
low ES	,058	**,094***	-,043	-,034	,029
middle ES	,014	-,113**	,031	,069	**,102***
high ES	,003	,002	,037	-,024	,023
Closeness					
very close	,029	**,171****	,011	,046	**,105***
close	,032	,030	-,032	-,055	,035
a bit close	,023	-,100*	,013	-,008	-,104*
not so close	-,133**	-,177**	,004	,029	-,074

[#] Note: The investigation into actual support relationships excludes exchanges between household members, farm owners and other alters (e.g. shop owner, social worker, loaners).
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

As illustrated in table 7.6.12, visits do not correlate with any attributes of alters, showing that visits happen with all alters because they build a basis for support relationships. The sharing of meals is particularly assigned to non-kin alters who live on commercial farms and are characterised by a low economic status and a very close emotional bond. All these attributes characterise farm dwellers because joint meals can only take place with alters who live nearby, mainly within the same farm community. In contrast, the exchanges of food items and small goods mainly take place with alters

who are kin-related and live in urban areas. The exchange of money mostly occurs with alters who are kin-related, have a middle economic status and have a very close emotional bond to the ego. With regard to gender, it is clear that money is predominantly exchanged with male alters while small goods are mainly exchanged with female alters.

7.6.6 Potential social support: Coping networks in times of food and livelihood insecurity

After the description of farm dwellers' *actual* support relationships, this chapter will focus on *potential* support relations. While actual support relationships describe existing exchange networks that are embedded in everyday life, potential relationships are discovered based on hypothetical questions, asking farm dwellers to whom they would turn to in times of need. In this respect, questions were normally phrased as "Suppose you need…" (SCHWEIZER / SCHNEGG / BERZBORN 1998, SCHNEGG / LANG 2002). Such data was collected during structured face-to-face interviews with 69 farm dwellers. Even though these questions were not restricted to the number of possible alters, most interviewees, men and women alike, reported one to two alters for each type of potential support.

Relationship roles of alters are linked with certain types of potential support. Table 7.6.13 displays alters' relationship roles and their position in terms of different types of potential support. Egos who are in need of small goods (matches, soap, paraffin, etc) would mainly turn to their friends (30.2%) to ask for support. When egos are in need of food, they would mainly ask friends (26.3%) and close kin (23.2%). Moreover, egos who need help in reading and writing of official documents would predominantly ask their close kin (40.6%) and also friends (18.8%). A similar pattern arises when an ego wants to discuss important matters or borrow a small sum of money, mainly approaching close kin (29.5% and 29.7%, respectively) and friends (21.1% and 29.7%, respectively). To ask for advice and to receive help during short illness, egos would mostly turn to close kin (38.9% and 25.8%, respectively) and their partners (18.9% and 33.3%, respectively). In case of longer periods of illness, egos would mostly ask close family members (63.6%) for support and care. When egos need a larger sum of money (> ZAR 1000), they would ask the farm owner (67.6%). If for any reason egos need to move out of their farm houses, they would move to close (32.5%) or extended kin (32.2%).

Overall, close family members and friends in particular play an important role in most types of potential support (see table 7.6.13).

Table 7.6.13: Different types of potential support according to alters' relationship roles

Types of support *(% per row)*	**Partner**	**Close kin**	**Exten-ded kin**	**Affinal kin**	**Neigh-bour**	**Friend**	**Farm owner**	**Other***
Small goods (n=106)	-	18.9	15.1	12.3	17.0	**30.2**	2.8	3.8
Food (n=99)	1.0	**23.2**	11.1	16.2	12.1	**26.3**	4.0	6.1
Writing documents (n=64)	14.1	**40.6**	4.7	4.7	4.7	**18.8**	6.3	6.3
Important matters (n=95)	18.9	**29.5**	9.5	9.5	6.3	**21.1**	2.1	3.2
Advice (n=90)	**17.8**	**38.9**	11.1	10.0	3.3	15.6	-	3.3
Short illness (n=93)	**33.3**	**25.8**	7.5	7.5	7.5	17.2	1.1	-
Longer illness (n=118)	11.0	**63.6**	13.6	7.6	0.8	1.7	0.8	0.8
Small sum of money (n=101)	2.0	**29.7**	5.9	9.9	8.9	**29.7**	7.9	5.9
Large sum of money (n=68)	-	19.1	1.5	1.5	1.5	5.9	**67.6**	2.9
Leaving farm (n=59)	5.1	**52.5**	**32.2**	10.2	-	-	-	-

* The category includes shop owners, social workers, a community chief, church members, housemates and loaners.

As in the analysis of actual support relationships in chapter 7.6.5, correspondence analysis and Pearson correlation statistics are also applied in analysing potential support networks.

The scatterplot from the correspondence analysis in figure 7.6.7 provides a clearer insight into the association between relationship roles and types of potential support. In the plot, relationship roles are marked with green stars and support roles are marked with blue circles.

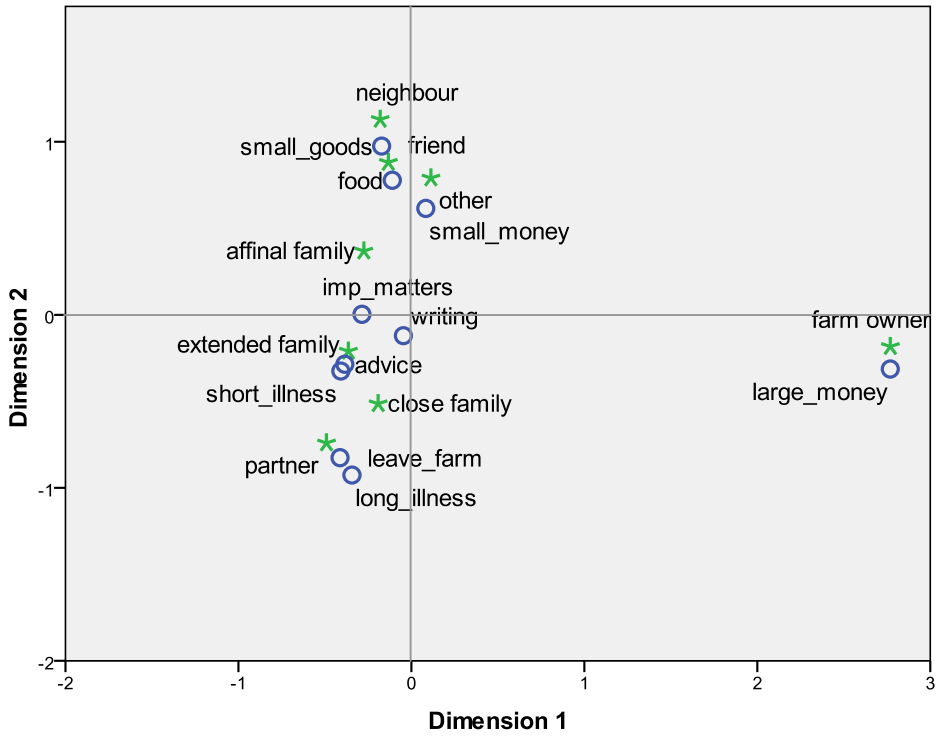


Figure 7.6.7: Relationship roles and types of potential support (correspondence analysis)

The two dimensions of the plot capture 81.6 percent of the variance of the data. The first dimension on the horizontal axis captures 58.8 percent of the variance and illustrates the wide split between farm owners on the right side, and all other alters on the left side. Thus, farm owners have a very specific role within farm dwellers' social support networks which differs greatly from other alters. Farm owners are mostly turned to when a large amount of money is needed. All other material, caring, lodging and small financial support forms are related to other alters.

The second dimension captures 22.8 percent of the variance of data and reveals two clusters of certain support forms between kin and non-kin relationships, respectively, in the lower and upper part of the plot. Non-kin alters (neighbours, friends, other alters, in the upper part) are closely situated to material and financial support forms. Especially neighbours and friends are referred to when small goods or food are needed, while other alters (mainly shop owners) are turned to when a small amount of money is needed. Emotional, caring and lodging support is usually asked from kin (extended and close family, partners), located in the lower part. Important matters as well as asking for support in writing or reading documents are relatively central in the plot, indicating neither a distinct support role nor being assigned to a certain relationship role. Care during short illness and provision of advice are located almost at the same point in the plot in close proximity to close and extended family members, indicating that these support forms are mostly provided by family. The partner is at the lowest point in the plot, setting the opposite pole towards non-kin alters. It shows that partners and non-

kin alters vary largely with regard to the type of support they provide. Closely located to partners and to close family members are the support forms requested when leaving the farm and during long illness. The partner and close family members play a specific role in providing support during long illness and providing accommodation when an ego needs to leave the farm.

Specific characteristics of alters can determine the potential support relations to egos. Table 7.6.14 summarises the correlations between alters' characteristics and different forms of potential support. Alters' gender clearly determines certain types of potential support. When egos need advice or larger amounts of money, they turn to male alters. On the other hand, female alters are asked for support when an ego is in need of small goods and care during short and longer periods of illness. Moreover, the relationship role determines certain types of potential support. Kin-related alters provide support with advice, care during short and longer periods of illness and when ego needs to leave the farm. Non-kin related alters support the ego with small goods, foods, small and large sums of money.

Alters who live on commercial farms provide almost all types of potential support, except for assistance during longer illness and provision of accommodation when needed. The latter are provided by alters who live in urban areas.

Also the economic status of alters appears to influence the type of potential support to egos. While alters with very low and low economic status, respectively, provide support during short periods of illness and advice, alters with middle economic status help the ego with writing and reading official documents or providing accommodation when the ego leaves the farm. The ego would turn to alters with high economic status, in most cases the farm owner, if they need to borrow a large amount of money.

The closeness between ego and alter clearly determines which support forms are asked for. Most potential support forms are asked from alters who are very close to the ego, including support with reading and writing official documents, borrowing food, discussing important matters and asking for advice, caring during illness and borrowing small amounts of money. Small goods are asked from close alters. Only when an ego needs a large amount of money do they turn to alters who are not so close (in most cases the farm owner).

Table 7.6.14: Correlation of potential social support forms and reciprocity with alters' characteristics (bivariate pearson correlation)

Alter characteristics	Small goods	Writing documents	Important matters	Advice	Short illness	Longer illness	Small sum of money	Large sum of money	Food	Leaving farm
Gender										
male / female	**-,080***	-,033	,023	**,103****	**-,207****	**-,079***	-,010	**,194****	-,051	-,015
Relation										
kin / non-kin	**-,160****	-,004	,022	**,104****	**,077***	**,288****	**-,144****	**-,287****	**-,109****	**,221****
Place of residence[#]										
farm / town	**,239****	**,081***	**,112****	**,082***	**,154****	**-,083***	**,186****	**,103****	**,237****	**-,396****
Economic status										
very low ES	,080*	,014	-,055	-,062	**,116****	,073	-,086*	-,173**	-,007	,015
low ES	-,015	-,035	,069	**,119****	-,020	,018	,055	-,235**	,002	-,008
middle ES	-,038	**,074***	,052	-,002	-,024	-,006	-,016	-,044	-,015	**,092***
high ES	-,056	-,032	-,085*	-,108**	-,113**	-,132**	,049	**,686****	,022	-,094*
Closeness										
very close	-,017	**,128****	**,198****	**,202****	**,328****	**,141****	**,128****	-,021	**,115****	-,049
close	**,084***	-,017	-,007	-,051	-,137**	-,111**	-,048	-,027	-,008	,024
a bit close	-,020	-,083*	-,152**	-,109**	-,136**	,036	-,119**	,002	-,066	,026
not so close	-,084*	-,052	-,110**	-,105**	-,124**	-,108**	,032	**,079***	-,090*	,007

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
[#] Alters of neighbouring countries (n=2) have been excluded due to small sample size.

7.6.7 Multiplexity of network ties

The diversity of potential support relations between ego and his/her alter is described by the degree of multiplexity. It describes the number of existing support relations out of the 10 possible potential support relations (support with small goods and food, assistance with filling in forms, discussion of important matters, asking for advice, assistance during short and longer illness, borrowing of a small and larger amount of money, provisions of accommodation). The average degree of multiplexity of potential support relationships is 1.24 (Std.dev. 1.48). This means that out of 10 possible potential support forms, alters provide on average one.

The multiplexity of actual support relationships was not calculated since they exclude relationships to partners, farm owners and other alters, giving an incomplete picture.

As displayed in figure 7.6.8, figure 7.6.9 and figure 7.6.10, the degree of multiplexity differs between different relationship roles, closeness to alters, gender and place of alters' residence.

Figure 7.6.8 illustrates that partners have the highest degree of multiplexity with a mean of 1.66. In this ranking, affinal kin (mean 1.48), close kin (mean 1.41) and neighbours (mean 1.40) follow closely. The relationship to the farm owner has a mean multiplexity of 1.35. Network ties characterised by mostly one support role (uniplex) are found to friends (mean 1.16) and other alters (mean 1.1) and extended kin (mean 0.71). Differences between the different relationship roles are significant with $H(7)=52.88$ and $p<0.001$.

Figure 7.6.9 clearly shows that the degree of multiplexity decreases with the decreasing closeness of alters. These differences are significant with $H(3)=53.20$, $p<0.001$.

Figure 7.6.10 shows that network ties to alters living in urban areas have a lower degree of multiplexity (mean 0.82) compared to alters living on commercial farms (mean 1.40). This difference is significant ($U=40408.50$, $p<0.001$). Moreover, network ties to female alters show a slightly higher multiplexity (mean 1.30) compared to male alters (mean 1.17), however, this is not significant ($U= 61768.50$, $p=0.562$).

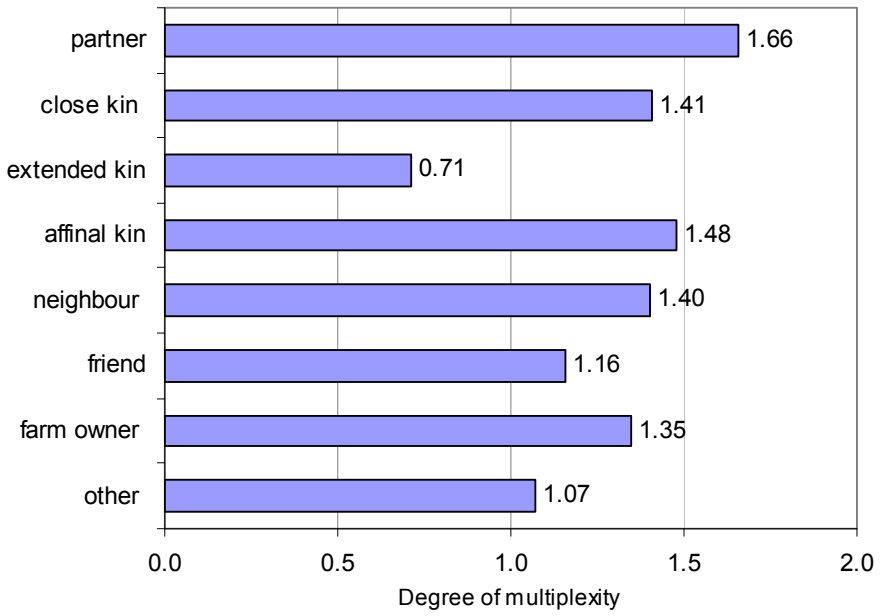


Figure 7.6.8: Degree of multiplexity according to relationships to alters

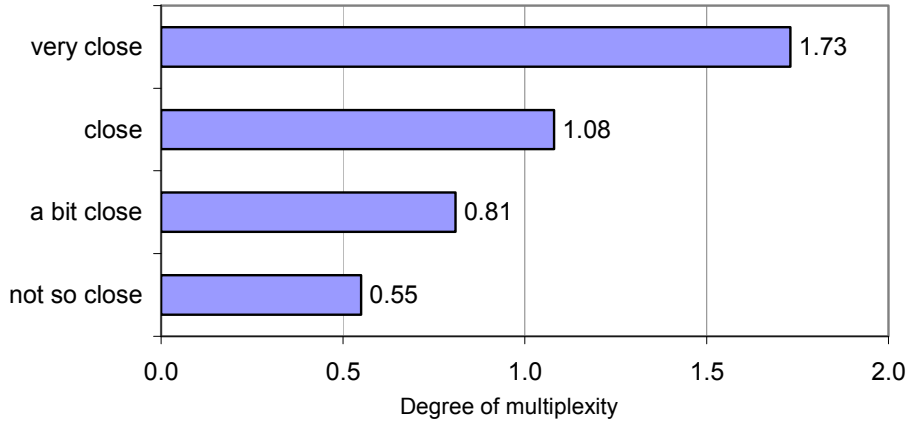


Figure 7.6.9: Degree of multiplexity according to closeness of alters

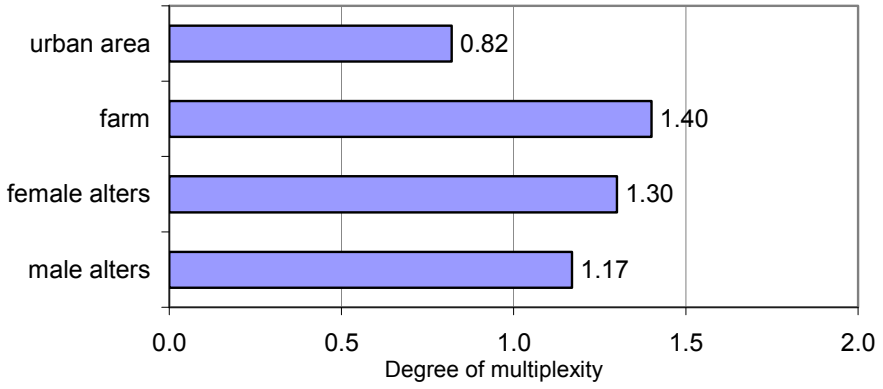


Figure 7.6.10: Degree of multiplexity according to alters' gender and place of residence

7.6.8 Farm dwellers' characteristics influencing network size and formation

Certain characteristics of the ego can influence the size of his/her network of different actual support relations, such as visits, joint meals, food exchange, small goods and money exchange. Table 7.6.15 summarises the p-values of the comparison of ego's characteristics with the mean number of alters providing different actual support forms (fully corresponding contingency tables are displayed in appendix 12).

Table 7.6.15: Summary of p-values of the comparison of egos' characteristics with mean number of alters providing actual support

	p-values Comparison of mean number of alters providing different forms of actual support				
Ego's characteristics	**Visits**	**Joint meals**	**Food items**	**Small goods**	**Money**
Gender*	0.126	0.269	0.389	**0.012**	0.091
Place of residence	0.830	0.259	0.626	**0.053**	0.680
Age	0.319	**0.003**	0.294	0.106	0.092
Distance to place of birth	0.990	**0.022**	0.771	**0.004**	0.422
Length of stay on farm	0.958	0.984	0.949	0.735	0.077
Level of income	0.555	0.392	0.453	0.548	0.247
Household category	0.941	0.855	0.507	0.321	0.250
Level of food security	0.342	0.374	**0.019**	0.929	0.463

* Gender differences in the network size of actual support relationships are described in detail in table 7.6.7, p. 212.

Table 7.6.15 shows that ego's length of stay on the farm, level of income and household category do not influence network sizes of any actual support relationship. Also, the number of alters with whom the ego exchanges visits and money is not significantly influenced by any of the ego's characteristics. Nevertheless, certain characteristics like the ego's place of residence, age, distance to birth place, and level of household food security significantly influence the network size of different actual support forms.

As further displayed in table 7.6.15, the mean number of alters sharing meals with the ego differs significantly between age groups and the birth place of the ego ($H(2)=0.11.95$; p=0.003 and $H(2)=7.64$; p=0.022, respectively). According to the respective contingency table in appendix 12, egos older than 60 years share meals with fewer alters (mean 1.1) compared to egos aged between 20-40 years and 41-60 years (mean 3.1 and 2.5, respectively). The reason why older people tend to share fewer meals with other people might be that they generally have a smaller network size

within the farm area compared to younger people (see chapter 7.6.1). Furthermore, egos born more than 100 kilometres away from the farm area have fewer alters with whom they share meals (mean 1.6) compared to egos born at a distance between one to 50 kilometres and 51 to 100 kilometres (means 2.9 and 3.5, respectively).

The number of alters exchanging food items with egos varies significantly between the different household food security levels (U=328.50; p=0.019). As can be seen in appendix 12, egos living in food insecure households exchange food items with more alters (mean 3.9) compared to egos living in relatively food secure households (mean 2.5).

The number of alters exchanging small goods with egos varies significantly between the different places of residence (the four farm settings) and ego's birth place (H(3)=7.66; p=0.053 and H(2)=11.17; p=0.004, respectively). The corresponding contingency table in appendix 12 illustrates that egos in the informal settlement have on average two people with whom they exchange small goods, while egos who live on the three farms have less than one person for that purpose (means Ouplaas 0.6, Koppiesplaas 0.5, Vlakteplaas 0.3). Besides, egos born more than 100 kilometres away have more alters with whom they exchange small goods (mean 1.7) compared to egos born at a distance from one to 50 and from 51 to 100 kilometres away (means 0.4 and 0.5, respectively).

7.6.9 Structural insights into complete networks within the farm communities

Following a complete network approach, support relations between all interviewees residing in Ouplaas, Vlakteplaas and Koppiesplaas were visualised using the network visualisation software NetDraw (BORGATTI 2002, Analytic Technology, version 2.086) which is an integrated part of the social network analysis software UCINET (BORGATTI, EVERETT, FREEMAN 2002, Analytic Technology, version 6.221). A non-metric Multi Dimensional Scaling (MDS) was used to create the network graph. In network analysis, MDS is a technique that assigns locations to nodes in the two-dimensional space. In that way, nodes that are 'more similar' are closer together and thus, distances between the nodes are interpretable. Here, NetDraw has several built-in algorithms for generating coordinates based on similarity (metric and non-metric two-dimensional scaling, and principle components analysis) (HAHNEMAN/ RIDDLE 2005: Chapter 4, p. 12).

Due to the complete network approach, only the relations between the interviewees residing on the three investigated commercial farms were visualised. Relationships to alters who were not part of the study sample were excluded. Interviewees residing in the informal settlement were excluded, too, because of their small non-representative sample size. Moreover, support relations between partners and spouses were not

visualised since they vary immensely from other support relations between actors and would only distort the network graph.

Figure 7.6.11 displays all actual and potential support relations among all interviewees living in Ouplaas, Vlakteplaas and Koppiesplaas, including support relations to farm owners and shop owners and illustrating interviewees' gender as well as kin and non-kin relations. In total, support relations between 58 interviewees (32 male and 26 female), three farm owners and two shop owners are visualised.

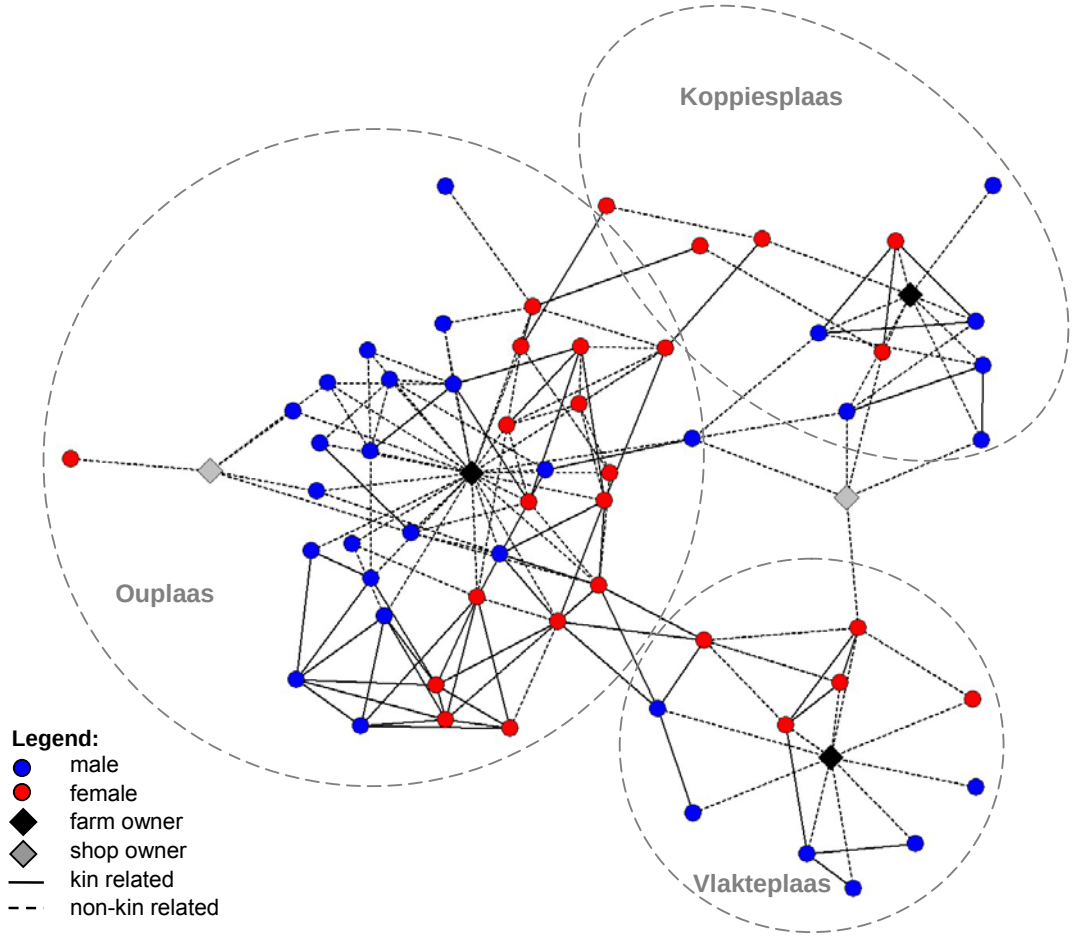


Figure 7.6.11: Social support networks among interviewees residing on the three commercial farms

Due to the NetDraw's MDS scaling, similar nodes were located close to each other. Thus, it is not surprising that the three main clusters of the graph represent the three farm settings. The dashed circles were added by the researcher to distinguish the three clusters according to the farm settings. The network appears very connected without the presence of any isolates (nodes without ties). In total, only four nodes are connected to the network by only one tie. All other nodes have at least two connecting ties.

The farm owners are situated in the centre of all three farm setting clusters. Their centrality represents their power in farm dwellers' networks as well as the key role in providing support.

Furthermore, it can be seen in figure 7.6.11 that the shop owner situated between Koppiesplaas and Vlakteplaas bridges the nodes between the two places. As stated earlier (see chapter 7.3.3), shops and the closely located taverns are central meeting points for farm dwellers of different farms. Thus, inter-linkages between farms are most likely established and nurtured in this setting.

When looking at the location of male (blue colour) and female (red colour) nodes, it is noticeable that both sexes build clusters. This confirms the homogeneity between genders as described in chapter 7.6.2. Male egos interact mostly with male alters and female egos with female alters. Moreover, nodes representing female actors are more centrally located within the whole network structure, indicating that most inter-linkages between farms are established and nurtured by women. The exceptions are three men of Ouplaas and Koppiesplaas. They are work mates since both farms are operated by the same farmer (see chapter 6.1).

In total, the support network between all actors consists of 160 ties. The majority of ties are characterised by non-kin relationships (n=100, 62.5%). The remaining 37.5 percent of ties are kin relationships (n=60). Since Ouplaas is the largest setting with the highest number of farm dwellers, the number of existing support relationships (105 ties) is much higher compared to Koppiesplaas (19 ties) and Vlakteplaas (22 ties).

Interestingly, most inter-linkages between farms are through kin relationships with the exception of the three work mates of Ouplaas and Koppiesplaas. Thus, kin relationships seem to be very important in bridging spatial distances between the farms.

Main characteristics of the support network displayed in figure 7.6.11 are summarised in the following table:

Table 7.6.16: Main characteristics of network graph (figure 7.6.11)

Number of:	Ouplaas	Koppies-plaas	Vlakte-plaas	Between farms	Total network
Node characteristics					
Male actors	20	6	6	-	32
Female actors	16	5	5	-	26
Farm owner	1	1	1	-	3
Shop owner	1	0	0	1	2
All actors	38	11	11	1	61
Isolates	-	-	-	-	-
Nodes with single tie	2	1	1	-	4
Tie characteristics					
Kin ties	39	6	8	7	60
Non-kin ties	66	13	14	7	100
All ties	105	19	22	14	160

In chapter 7.6.8, it has been shown that the number of alters exchanging food items with an ego varies significantly between the different household food security levels (*U*=328.50; p=0.019) (see table 7.6.15, p. 226). Figure 7.6.12, figure 7.6.13 and figure 7.6.14 give more detailed insights into the food exchange networks of relatively food secure and insecure households. The three figures were not newly scaled. For orientation purposes and to distinguish between the different farm settings, nodes have the same position as in figure 7.6.11. However, here, nodes are not marked with gender characteristics, but with food security characteristics. Green nodes illustrate actors from relatively food secure households and red nodes illustrate actors from food insecure households. Further, ties in the three figures indicate food exchange (including the sharing of meals) between the actors. Additionally, ties are directed, indicating who reported who as alters. When arrows are double-headed, it means that both actors reported to exchange food with each other. A one-headed arrow between two actors indicates that only one of the two actors reported a food exchange, while the other did not.

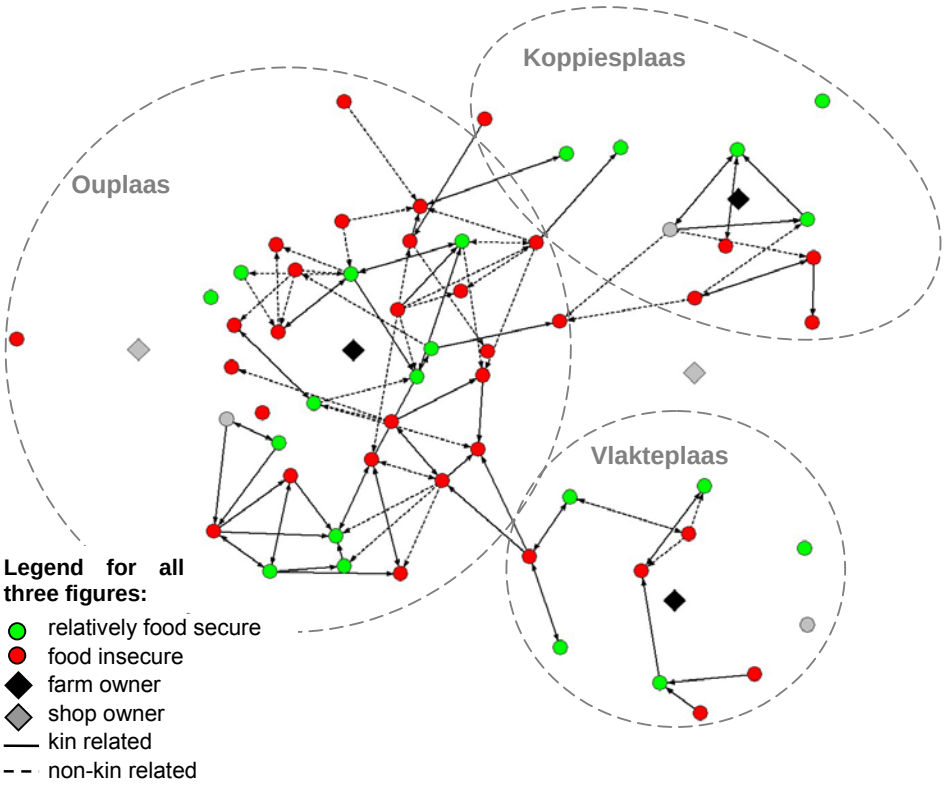


Figure 7.6.12: Food exchange network (including shared meals)

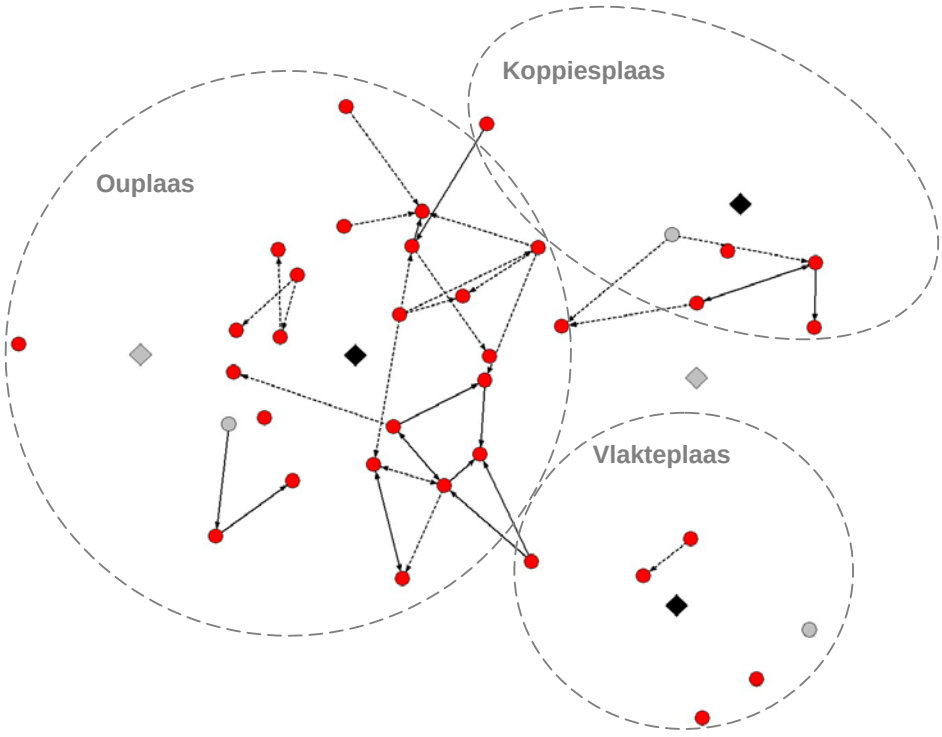


Figure 7.6.13: Food exchange network of food insecure households

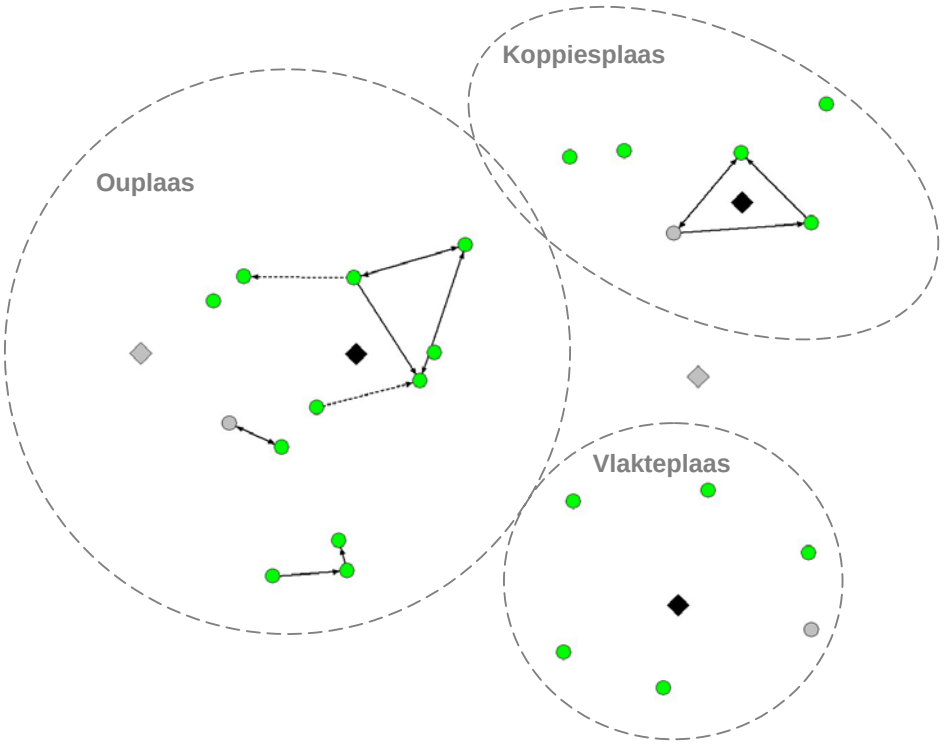


Figure 7.6.14: Food exchange network of relatively food secure households

Figure 7.6.12 shows a total of 57 nodes, 21 relatively food secure and 33 food insecure actors. The food security level of three actors is not known (grey nodes), but they are involved in the food exchange network. Slightly more ties are characterised by kin relations (n=42) compared to non-kin ties (n=37). In total, 79 food exchange relationships exist. Only 20 of them (25.3%) have been reported mutually by both actors (double-headed arrows). When food exchange relations are reported by both actors, it can be highly assumed that these relationships are stable and follow regular patterns. Furthermore, the majority of nodes in the network look very connected. Especially in Ouplaas, a dense network of food exchange relations can be seen. This, however, can be ascribed to the fact that more nodes exist in this setting leading to more possible relations between them. Moreover, the graph shows six isolates and eleven nodes with only one tie, making up 29.8 percent of all nodes that show none or low connectivity. Food exchange relations also take place between the different farm settings, with seven inter-linkages displayed in figure 7.6.12.

When extracting the food exchange network of food insecure (figure 7.6.13) and relatively secure actors (figure 7.6.14), major differences come to the fore. There are far more food exchange relations between food insecure actors (n=33) than between relatively secure actors (n=11). Hence, far more relatively food secure actors are not engaged in any food exchange (isolates n=11, 45.8%), compared to 16.6 per cent of isolated nodes (n=6) in the network of food insecure actors. Furthermore, most food

exchange networks of food insecure actors are characterised by non-kin relationships (n=19, 57.6%) while most food exchange relations between relatively food secure actors are based on kin relationships (n=9, 81.8%). Food exchange networks between farms only exist between food insecure actors (n=5). Relatively food secure actors do not exchange food with actors from other farm settings. In summary, both figures show that food insecure households rely more on food exchange networks than relatively food secure households, confirming the findings of table 7.6.15 in chapter 7.6.8. Moreover, food insecure households build wider networks, turning to a higher number of non-kin alters and overcoming greater spatial distances.

Main characteristics of the three food exchange network graphs are summarised in the following table:

Table 7.6.17: Main characteristics of food exchange network graphs

Number of:	**Whole network (figure 7.6.12)**	**Food insecure network (figure 7.6.13)**	**Relatively food secure network (figure 7.6.14)**
Node characteristics			
Relatively food secure actors	21	-	21
Food insecure actors	33	33	-
Not categorised	3	3	3
All actors (excl. farm owner and shop owner)	57	36	24
Isolates	6	6	11
Nodes with single tie	11	12	6
Tie characteristics			
Kin ties	42	14	9
Non-kin ties	37	19	2
Total ties	79	33	11
Ties between farm settings	7	5	-
Mutually reported ties	20	4	4

7.7 Other social capital sources

The notion of social capital comprises social resources of people on which they can draw to pursue their livelihood objectives (DFID 1999: 2.3.2). Besides social networks which are described in the previous chapter, only a limited number of other social capital sources are available in the farm area. These will be described in the following two chapters, including the role of the church and other group activities.

7.7.1 The role of churches within the farm area

During the structured face-to-face interview, farm dwellers were asked about their church affiliation, including the type and location of church, the frequency of attendance and in which ways church provides support in times of need.

Almost all interviewees (95.6%) stated that they mainly attend church services that take place on the farm (49.2%) or on neighbouring farms (41.5%). Only a few interviewees (9.2%) stated that they attend church services in nearby towns.

Regarding the frequency of church attendance[26], the majority of farm dwellers stated that they go to church services weekly (80.3%), while 11.5 percent go once to twice a month, 4.9 percent go sometimes and 3.3 percent go every day.

There are several types of churches to which farm dwellers are affiliated (n=55; eleven farm dwellers did not specify their church affiliation):

- Apostolic Church (29.1%)
- Orthodox Church (23.6%)
- Reformed Church (14.6%)
- Roman Catholic Church (12.7%)
- ZCC - Zion Christian Church (10.9%)
- Other[27] (9.1%)

The Apostolic and Orthodox Churches are the most common ones in the farm area. Interestingly, neither have a church building. Church services are held at the members' houses who host the services in a rotating manner. The consumption of traditional beer is part of the church meetings. The beer is prepared by the hosts in advance and consumed after the service.

[26] n=61, five interviewees did not report the frequency of church attendance.

[27] This category includes: MCC (3.6%); Methodist Church (1.8%); Anglican Church (1.8%); Moonstar Church (1.8%).

The service of the Reformed Church is held in a church located in the farm workers' housing area in Ouplaas. The building has been built by the farm owner of Ouplaas and is the only church building within the farm area.

The ZCC, an African independent church, holds its services in the informal settlement. Meetings and ceremonies always take place in the same house.

In times of need, most church members (71.2%) can rely on certain types of support from their church group. As illustrated in figure 7.7.1, church groups mainly help by giving money (74.5%) or advice (34.0%). Moreover, some interviewees also reported that their church group would help with food or clothes (14.9%), funeral arrangements (12.8%) and prayers (10.6%).

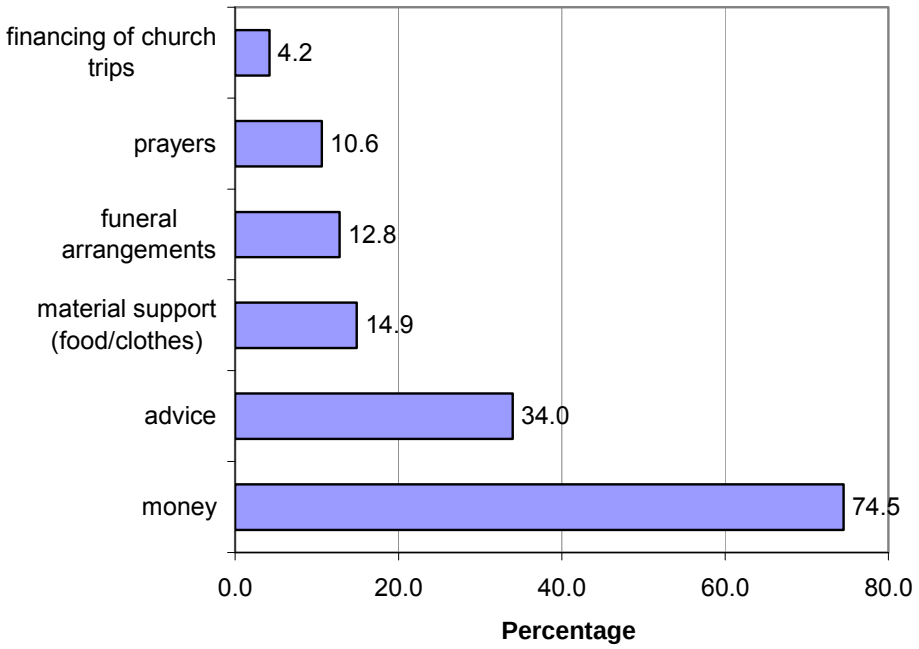


Figure 7.7.1: Support provided by church groups in times of need (multiple responses, % of respondents, n=47)

During qualitative informal interviews and through observations, a very complex and distinct role of the church came to light. The following figure tries to summarise the most important features of church groups within the farm area:

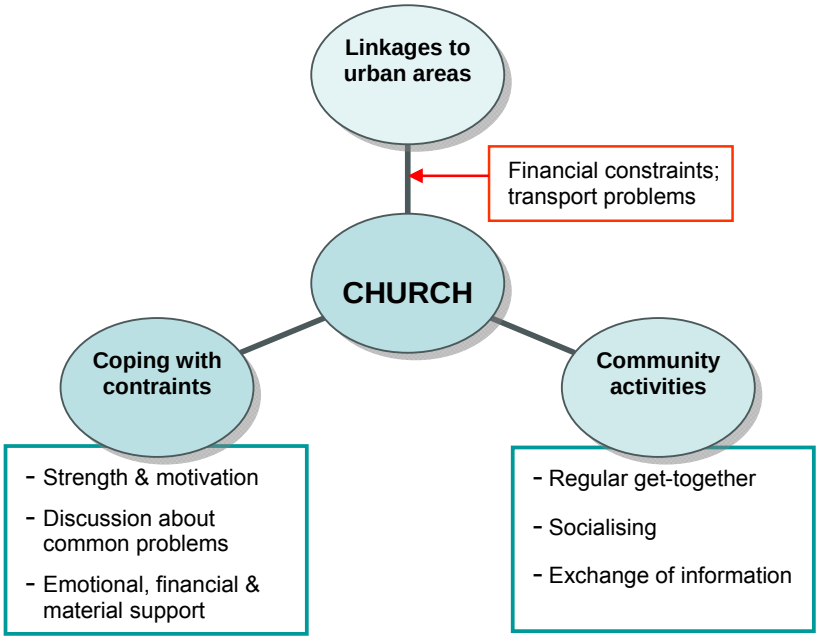


Figure 7.7.2: The role of church in farm dwellers' life

As shown in figure 7.7.2, the church in the farm area fulfils three main roles:

Coping with constraints:

During the church service, people can gain strength and motivation through prayers that help them to cope with constraints and problems. Furthermore, common problems such as alcohol abuse or violence are often addressed and discussed during the services. As illustrated above (see figure 7.7.1), most church members can rely on emotional, financial and material support from the church group when needed.

Community activities:

Church meetings are considered important community activities. They give farm dwellers from neighbouring farms a platform to meet and socialise regularly. In this way, information can also be exchanged.

Linkages to urban areas:

Churches are very well organised at the provincial and national level. Provincial or national church meetings take place throughout the year, mainly in urban areas, bringing together several church groups. Members of the church groups on farms are always informed about these meetings. However, financial constraints and transport problems hinder most farm dwellers from participating in such events. The church groups do not have enough funds to support members to participate.

7.7.2 Group activities on farms: savings groups, sewing groups, land claim community and soccer teams

Besides church meetings, other group activities are scarce within the farm area. The majority of interviewees (69.6%) are not members of any other group activity. However, as shown in figure 7.7.3, significantly more women (43.8%) are engaged in other group activities than men (18.9%) ($\chi^2(1)=5.00$; p=0.025).

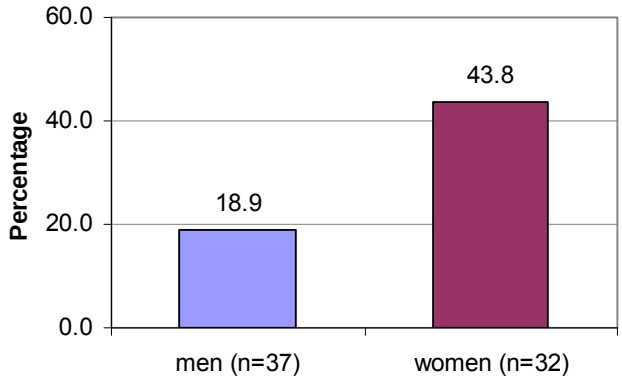


Figure 7.7.3: Participation in group activities according to gender (in %)

Farm dwellers reported four different types of group activities in the farm area which will be described in the following:

Savings groups:

One group activity within the farm area are savings groups, so-called *stokvels* (see also chapter 7.2.3). Men (13.5%, n=5) and women (15.6%, n=5) are almost equally engaged in these savings groups. The most important feature of these groups is that they are built on trust without any legal coverage. Thus, membership is only offered to persons who are well known and trusted. Six interviewees reported that they can ask for help in their savings group when they are in need of money or advice.

Restitution beneficiary group:

Due to the land restitution in Ouplaas, an interest group has been established with all beneficiaries who could prove that their ancestors had lived in that area. This group is headed and managed by one spokesperson who calls himself the community chief. Group meetings are carried out regularly to discuss and enforce the development of the farm and the future usage of the land by its beneficiaries. Out of 14 interviewees who reported to be beneficiaries, only eight stated that they regularly attend the group meetings. The group is built on joint interest in the farm land and does not encompass financial support or advice during times of need.

Sewing group:

The FLAGH programme of the North-West University established a skills development project for women in Ouplaas in 2008. During weekly meetings, women first learn how to sew and later how to market their products. In the long term, the aim is to build a sustainable business group which provides income for women. Three female interviewees from Ouplaas and the informal settlement stated to be part of the group. All of them have learnt new skills with great enthusiasm. More than once they proudly displayed their products and expressed the will to learn more and faster. Due to personnel and transport problems, meetings are irregular and often cancelled which is disappointing for the women. Nevertheless, the general observation has shown that the skills development group enhances women's self esteem.

Municipality committee:

Two women, one from the informal settlement and one from Vlakteplaas, reported to be part of a committee which was initiated by the local municipality. Committee meetings take place four times per year in the municipal city. Here, changes and developments of the region are discussed. However, both women could not clearly express what their roles are within the committee.

Through informal chats, it was realised that the men of Ouplaas and the informal settlement have formed a soccer team. Also in Vlakteplaas, women reported that men play soccer from time to time. On some weekends, there are matches between the teams of different farms which are initiated by farm workers themselves. The matches become events for men and women alike, where people can meet and support their teams. These events constitute the rare recreation opportunities besides meeting and socialising at church or at the taverns.

8 DISCUSSION

Using a mixed methods design that combines qualitative strategies with quantitative network analysis strategies, this research reveals the underlying causes for food and livelihood insecurity among farm dwellers and the interactions with and role of social networks. Applying a gender and micro-social perspective, findings do not only reveal constrained living conditions on farms, but also give in-depth insights into farm dwellers' response strategies in which social networks play a crucial role. In the following chapter, results of this study will be discussed within the broader context of South Africa and the current situation in the agricultural sector. The chapter begins with a detailed discussion of farm dwellers' livelihoods, including livelihoods assets and farm dwellers' own perceptions. This is followed by a discussion on farm dwellers' food and nutrition security. Thereafter, the woman's role on the farm and within the household will be highlighted, referring to their vulnerability but also to their own response strategies and resources. Then, farm dwellers' social networks will be closely examined, discussing the usage of relationships during everyday life and during times of need. This chapter will close with a discussion of the different gender roles within these networks.

8.1 Living in constrained conditions: Livelihood assets of South African farm dwellers

According to the DFID (1999) sustainable livelihoods framework, livelihoods are determined by five core assets, namely physical, financial, human, natural and social capital. As results in chapter 7.2 and 7.3 show, farm dwellers' livelihoods are particularly influenced by the farm specific environment and are characterised by a very low availability of livelihood assets. Compared to people living in urban areas, farm dwellers have largely missed out on the acquisition of modern life skills, which created an enormous development gap (ATKINSON 2007: 91). In the following, this 'development gap' will be discussed, examining the five different livelihood assets and farm dwellers' perceptions regarding their lives.

8.1.1 Physical capital: Inadequate access to basic services and tenure insecurity

Findings of this research have shown that farm dwellers' physical capital is severely affected by missing basic infrastructure, inadequate access to basic services and tenure insecurity, which shape a life of poverty, dependency and isolation. This picture is in line with general living conditions of farm dwellers in South Africa, as is highlighted

by several national studies (SAHCR 2003, HUSY / SAMSON 2001, KRUGER et al. 2006, SA DOL 2003a,b, DU TOIT 2004, 2005). Adequate basic services, such as medical care, education facilities and social services, are available only in towns at a distance of 30 to 50 kilometres from the farms observed here. This distance is hard to overcome because of very limited transport, resulting in farm dwellers being trapped on farms and strongly dependent on their employers for most basic service provisions.

Although a mobile health clinic attends the study area (see chapter 6.2), farm dwellers face major challenges in accessing this service due to the irregular appearance of the mobile clinic, long walking distances from some farms (up to 15 km) and a lack of access after hours and on weekends. The general lack of health care provisions for farm workers has also been revealed by a large national survey carried out on commercial farms (SAHRC 2003: 46). Furthermore, it has been found in the study reported on here that access to education is very limited. While primary schools in the farm area teach children up to grade seven, high school possibilities and adult education are largely missing. This situation is common on commercial farms in South Africa, making particularly women concerned about higher education possibilities for their children (KRUGER et al. 2006: 5, ATKINSON 2007: 102-103). Moreover, national governmental and non-governmental education or awareness campaigns rarely reach the farm area, with other social services also being absent. Access to clean water and electricity is not equally guaranteed on all four farm settings. While in urban areas the provision of minimum services relies on provincial governments and municipalities, on commercial farms it is mostly the responsibility of farm owners (ATKINSON 2007: 202). Farm dwellers living in the informal settlement included in this research have neither electricity nor access to clean water, revealing municipalities' failure to provide minimum services to remote settings. Having no access to water and electricity, farm dwellers may not be able to use available livelihood resources, such as agricultural and income-generating activities (HUSY / SAMSON 2001: 15).

Considering the general lack of access to complementary assets and services by poor people, such as farm dwellers, MAY et al. (1995, cited by MAY / WOOLARD / KLASEN 2000: 48) speak about the "poverty of opportunity". In this regard, inadequate access to primary health care, lack of education possibilities and restricted basic service deliveries unquestionably challenge access to other assets like human, social or financial capital (DFID 1999: 2.3.4) and thus restrict farm dwellers from participating fully in South African society.

Findings of this research further show the precarious situation of tenure insecurity among farm dwellers. Since housing on commercial farms is mostly linked to work contracts, farm dwellers constantly face the risk of eviction in the case of retrenchment, a farm sale or personal conflicts with the farm owner. The recent land restitution process of one of the farms in this area leaves non-beneficiaries in fear of eviction, too (see chapter 7.3.5). This situation differs from the informal settlement, where people live in self-built shacks which they can call their own. Secure housing is a productive

asset for poor households because it can serve as a buffer for the long term impacts of poverty (MAY / ROGERSON / VAUGHAN 2000: 236). Tenure insecurity, thus, greatly increases the vulnerability of farm dweller households, making eviction one of the major livelihood shocks which is often accompanied by other losses, such as work, income, homes and access to land for own production, and is linked to negative effects such as breakdown of family and social structures, and the disruption of children's education (WEGERIF / RUSSELL / GRUNDLING 2005: 8). With the inclusion of the Tenure Security Act in South Africa's land reform policy in 1997, new tenure laws addressing the rights of farm dwellers have been implemented. However, their effectiveness is questionable given that close to one million people were evicted from farms since the beginning of democracy in 1994 (WEGERIF / RUSSELL / GRUNDLING 2005: 185). There are only a few policy initiatives in place that prevent evictions or address land needs of farm dwellers. Adding to this is an inadequate justice system, which fails to protect farm dwellers or to act against land owners, resulting in the majority of farm dwellers not knowing their tenure rights and where to seek legal assistance (WEGERIF / RUSSELL / GRUNDLING 2005: 188, LAHIFF 2008: 4).

8.1.2 Financial capital: Low farm wages and limited income sources

Besides low availability to physical capital, this research indicates that farm dwellers' livelihoods are further characterised by very restricted financial capital (see chapter 7.2.1 and 7.2.2). Income generating opportunities on commercial farms are clearly linked to farm employment, which is strongly gender-biased, favouring male workers for permanent employment and women only for seasonal employment. The average monthly farm wage varies between the different farm settings observed here, with two out of three farms meeting the minimum wage requirements of ZAR 989 in 2007/08[28] (SA DoL 2006). This shows that minimum wages along with other legislations are still not implemented equally on all commercial farms. A similar observation has been made by ATKINSON (2007:123), highlighting that the difficult access to farms hinders labour inspectors to actively enforce and implement labour legislations on farms. Nevertheless, many farmers have implemented minimum wages, but correspondingly reduced bonuses, introduced deductions and decreased payments in kind, often leaving farm dwellers with less than before (ATKINSON 2007:123, LEMKE / BELLOWS / HEUMANN 2009: 201). On the three farms observed here, an average of 17.9 percent is deducted from the monthly farm wage for the provision of food rations and housing, being in line with the stipulations for farm owners to deduct a maximum of 10 percent of the wage for housing and 10 percent for food (SA DoL 2006). Seasonal farm employment is offered primarily to women almost throughout the year. However,

[28] Time period during data collection

because of its tough labour conditions and its low payment (ZAR 120-250 per week), seasonal work in the fields is not an attractive income for women and thus is only performed irregularly by every fifth woman. Access to alternative income sources is scarce, particularly due to the poor infrastructure of the farm settings. Remittances from partners or relatives (14.5%) as well as income from off-farm employment (4.3%) are exceptional and constitute low and unreliable income sources. A few farm dwellers (11.6%) run informal trading businesses mainly as self-employed *tuck shop* owners. With the exception of one case, these *tuck shops* only provide a small additional income (median ZAR 320.0) for the farm household. As TORRES et al. (2000: 81) state participation in the informal labour market, like owning informal trade businesses, does not offer much by way of long-term employment and seldom enables people to live above the poverty line. Furthermore, it has to be noted that most farm dwellers in this study lack the financial capital which is required to start income generating activities.

Findings further show that the dependency on social assistance grants is particularly high among vulnerable groups, such as women, elderly and sick people, who do not have direct access to farm employment. Although the child grant is relatively low at ZAR 200.0 per month, it constitutes the only secure income for women with children aged below 15 years. Pension grants, ranging from ZAR 780 to 880, largely contribute to the livelihoods of eligible households, making it possible to stay in the farm area after retirement. In fact, due to this high pension grant, pensioners often take care of grandchildren or live with and support their unemployed children and offspring (LEMKE 2001: 188, FRANCIS 2002a: 545, SA DoSD 2002). The death of a pensioner and thus the loss of the pension grant can move these households from poverty into dire destitution (SA DoSD 2002: 153). It needs to be acknowledged that South Africa has the largest social assistance system on the African continent; however it is failing to address the millions of people living precarious existences due to unemployment, underemployment and the growing survivalist informal economy (FRYE 2008). Indeed, this argument cannot be overlooked when debating the vulnerable situation of farm dwellers, which is characterised by high unemployment and underemployment rates among women and low farm wages for men, fobidding them from living a decent life. Moreover, access to social assistance grants is particularly difficult for poor people, including farm dwellers, living isolated from towns, due to the lack of information, transport and missing official documents, such as birth certificates and identity documents (HEUMANN 2006: 117-118, WEGERIF / RUSSELL / GRUNDLING 2005: 159).

The mean monthly household income of farm dwellers in this study amounts to ZAR 1112.2 and is far below the national average income of ZAR 3142.6 for black South Africans, who are already in the lowest income group (STATS SA 2008a: 9). In South Africa, many households confronted with poverty draw on multiple and diverse livelihoods which require flexibility, access to information and investment in social capital (FRANCIS 2002a,b, SLATER 2002, NAIDOO 2000), attributes most farm dwellers do not have. The average number of income sources among interviewed households is 2.4, mostly consisting of a wage income and other small incomes like the child support

grant. It is thus not surprising that farm dwellers only have limited financial assets such as property, savings and other investments. Just above one third of interviewed farm dwellers (37.7%) possess property outside of the farm area, not only linking them to urban areas, but also providing future perspectives and security in case of retrenchment or eviction. While 42.0 percent of farm dwellers invest in formal burial societies, saving money in bank accounts (8.7%) and in *stokvel* groups (14.5%) is not common. Clearly, farm dwellers' low incomes are the main reasons for their restricted ability to accumulate savings and engage in investments. Nonetheless, low physical and social capitals also contribute to limited financial capital.

8.1.3 Human capital: Illiteracy, low health status and the devastating impacts of alcohol abuse and HIV/AIDS

In this research it was found that farm dwellers' human capital is closely intertwined with their restricted physical capital. In particular, limited access to education and information, and a lack of basic services have devastating impacts on farm dwellers' health, work ability, knowledge and skills. The illiteracy rate among farm dwellers in this study is strikingly high (39.1%), but confirms the general lack of education among South African farm workers (SA DoL 2003b: 35, KRUGER et al. 2006: 4, HUSY / SAMSON 2001: 16). Farm dwellers form a low-qualified labour force and therefore have only restricted job opportunities outside the farming sector, rendering them trapped in "a cycle of poverty and marginalisation" (LONDON / SANDERS / NAUDE 1998: 1093). Besides low levels of literacy, limited access to interventions and service deliveries by the government or civil societies (e.g. life skills programmes, health and legal rights awareness campaigns) excludes farm dwellers from current developments in the society, resulting in a lack of awareness about their rights and opportunities and a lack of valuable information to empower themselves (HUSY / SAMSON 2001: 15, ATKINSON 2007: 109). This highlights once more the urgent need for empowerment and societal incorporation of farm dwellers. Nonetheless, it should not be forgotten that most farm workers have life-long practical experiences in agricultural work where they have gained profound technical and specialised knowledge in agriculture (MOSELEY 2006: 5, ATKINSON 2007: 10). This valuable asset forms an enormous potential for building sustainable livelihoods and food security among farm dwellers.

Although the health status of farm dwellers has not been the focus of this research, it is evident that farm dwellers' human capital is further constricted by an alarmingly poor health status, which is characterised by high burdens of occupational health hazards and communicable and non-communicable diseases (LONDON 2003: 60). As observed in this study, limited access to health care facilities, low levels of health education and inadequate sanitation facilities contribute largely to farm dwellers' low health status

(WHO / UNICEF 2000: 5, HUSY / SAMSON 2001: 15, SAHRC 2003: 46). As results of this study show (see chapter 7.3.2), sickness and death are serious threats to the livelihoods of farm dwellers. These threats do not only pose a high emotional burden on households but also cause severe financial constraints due to loss of productivity and income as well as high medical and funeral expenses.

Furthermore, findings highlight that alcohol abuse among farm dwellers tragically impacts on farm dwellers' health, human capital and other livelihood assets (see chapter 7.3.3). Alcohol abuse is widely prevalent in South African farm communities (HUSY / SAMSON 2001, LONDON 2003, KRUGER et al. 2006, ATKINSON 2007). Destitute living conditions, lack of recreation facilities and isolation from urban areas are among the main reasons for regular alcohol abuse among farm workers. Moreover, this study argues that a lack of future perspectives and feelings of powerlessness and dependency contribute to alcohol abuse among farm dwellers. Alcohol consumption further constitutes an important social component within the farm area because it connects people from the surrounding farms who meet at taverns or socialise after church ceremonies. As the qualitative analysis of this study shows, alcohol abuse has severe consequences for farm dwellers' lives in multiple ways. Alcohol has severe health implications not only through its direct physiological effects (e.g. liver damage) but also through increased risky behaviour, such as injuries caused by alcohol-related assault or occupational negligence, or HIV infection caused by unprotected sexual intercourse. Excessive drinking during pregnancy further has severe implications on children's health and development (LONDON 2003: 61, RENDALL-MKOSI et al. 2008: ii). Moreover, because alcohol is costly it can have a direct negative impact on household's food and livelihood security. Spending money on alcohol often leads to financial constraints and leaves less money to buy adequate food, resulting in food insecurity and inadequate diets, a situation that has also been observed by KRUGER et al. (2006: 4). Moreover, findings further reveal that alcohol increases the potential for conflicts, crime and violence at the household and community level.

When discussing farm dwellers' human capital, the notion of HIV/AIDS cannot be ignored. National data on HIV prevalence in rural and farming areas is completely lacking and only a few local studies are available that explore the social implications of HIV/AIDS in these areas (SEIDEL / NTULI 1996, LEMKE 2005, FORD / HOSEGOOD 2005, NIEHAUS / JONSSON 2005, POSEL / KAHN / WALKER 2007). Findings of this research show that farm dwellers are particularly vulnerable to HIV/AIDS (see chapter 7.3.4). Infrastructural constraints make it difficult to achieve sufficient knowledge concerning HIV/AIDS, hindering effective protection and nurturing high levels of stigmatisation and discrimination in the farm communities. Inadequate sanitary facilities and access to health care and counselling for HIV infected persons,increase the burden of HIV/AIDS. Moreover, farm dwellers' financial constraints enforce coping strategies which might increase the risk of HIV/AIDS, such as migrant work or exchanging sex for financial or material benefits. WEISER et al. (2007) observed that women who lack sufficient food

are more likely to engage in intergenerational sex and survival sex and are more likely to have unprotected sex. Specific social conditions on farms further increase farm dwellers' vulnerability to HIV/AIDS. Seasonal migrant contract workers may spread HIV within the communities when getting involved in sexual relationships. Alcohol abuse among farm dwellers may exacerbate risky behaviour, such us unprotected sexual intercourse, violence and rape. In addition, so-called traditional perceptions result in low condom use among farm dwellers, as has been observed here and was also revealed on farms in Limpopo, where 25.0 percent of HIV positive employees who know their status do not use condoms (IOM / HTT 2008). Moreover, gender relations on farms are characterised by high dependency of women on their partners. Thus, women are at a particularly high risk of HIV infections, because they might not be in a position to negotiate safe sex, to seek voluntary testing and counselling, or to disclose their HIV status (KISTNER 2003: 6). A specific feature of South African commercial farms is the existing paternalistic structure that often leaves farm workers disempowered and dependent on the farm owner (ATKINSON 2007: 109). This also has impacts on farm dwellers' vulnerability to HIV/AIDS because they do not have the capacities and confidence to obtain information and express certain needs.

Findings show that there are only a few limited support structures for people living with HIV/AIDS on the farms observed. As the case study in chapter 7.3.4 illustrates, the disability grant is largely contributing to the income of HIV-affected poor households. However, the disbursement of disability grants to HIV-infected people has gained increased attention lately because access to the free governmental antiretroviral treatment leads to health improvements and subsequent disqualification of the disability grant. Hence, HIV-infected people are forced to choose between life saving treatment or being eligible for the disability grant (RICHTER / HARDY 2006, LECLERC-MADLALA 2006). The demand for better social grant targeting is therefore increasing and the benefit of a basic income grant to all South Africans is widely discussed to tackle the problem of poverty and HIV/AIDS (RICHTER / HARDY 2006: 85).

HIV/AIDS forms an acute livelihood shock for farm dwellers in this study because it implies severe financial and emotional stress on households in various ways. The high levels of stigmatisation and discrimination as observed in this study may lead to social exclusion and the breakdown of social support networks, resulting in emotional distress on the one hand and increased livelihood insecurity on the other. Thus, affected people prefer to move to urban areas (see chapter 7.1.2), hoping for better access to services and greater social acceptance. Yet, misconceptions and stigma around HIV/AIDS and resulting discrimination of affected persons are not only present on commercial farms but almost throughout South Africa (NIEHAUS / JONSSON 2005, POSEL / KAHN / WALKER 2007, SIMBAYI et al. 2007, HOSEGOOD et al. 2007: 8).

When discussing the devastating impacts of HIV/AIDS, it needs to be stressed that HIV/AIDS does not only affect the household and community level but has striking consequences on South Africa's agricultural sector as a whole. According to FAO

(2007b), AIDS will lead to an estimated loss of 20 percent in South Africa's agricultural labour force from 1985 to 2020.

8.1.4 Natural capital: Fertile ground for livelihoods and land reform

Although farm dwellers are a rural population group who work and live on agricultural land, their livelihoods are not based on subsistence farming. This research shows that only a few households use natural capital resources, such as growing vegetables, keeping small livestock and collecting firewood. Depending on the season, some women collect wild fruit or green-leafy vegetables to diversify their diets. Although the usage of natural capital resources might seem small, they contribute an important part of farm dwellers livelihoods, to which many urban residents do not have access (WEGERIF / RUSSELL / GRUNDLING 2005: 163). In South Africa as a whole, agricultural activities are low but form the third most important livelihood strategy in rural areas, after remittances and wages from low-skilled jobs (MAY / ROGERSON / VAUGHAN 2000: 234). Nonetheless, access to natural resources on farms strongly depends on the farmer who is the legal owner of the land. If farm dwellers want to engage in subsistence farming to improve their livelihoods, farm owners have to agree and allocate a plot of land for their workers.

An opportunity for farm dwellers to make a living from agricultural activities, either subsistence or commercial farming, may be provided through South Africa's land reform policy. Results of this study show that 28.6 percent of interviewees who are affected by the land restitution think that the new land rights will enable people to farm their own land, produce their own food and earn an income through selling the farm products (see chapter 7.3.5). While there is a business plan as part of the shared equity scheme which aims at gradually releasing the farming operations to the beneficiaries, most interviewed beneficiaries did not have specific residential or farming plans at the end of field work in 2008. The process is further characterised by limited financial and technical support to the claimants, albeit the previous farmer tried to provide technical knowledge on large-scale commercial farming to the new land owners. Farm workers who have a basic technical knowledge about farming are left out of the process, most likely having to face unemployment and eviction in the future. Beneficiaries of the land restitution are generally very happy and proud to finally possess land which once belonged to their ancestors. However, both beneficiaries and non-beneficiaries complain about the lack of information and intransparent processes, leaving them with false hopes and uncertainty of the future. These results confirm the general state of land reform in South Africa. Inadequate planning, a general lack of capital and skills among beneficiaries, a lack of post-settlement supports and poor dynamics within beneficiary groups remain the major challenges to the land reform programme, resulting in low agricultural production and little impact on livelihood

benefits (LAHIFF 2008). The land and tenure needs of farm dwellers who belong to the official target group of the land reform policy, are largely neglected (MOSELEY 2006, LAHIFF 2008). However, including and strengthening farm dwellers capacities, such as their technical and specialised agricultural skills, might be an important contribution for a more successful land reform in South Africa (MOSELEY 2006, ATKINSON 2007).

8.1.5 Social capital: Weak collective action and strong paternalistic structures

Results of this study show that social networks, as one type of social capital, play an important role in farm dwellers' social life (see chapter 7.6, social networks will be further discussed later within this section). However, other social capital sources like group activities and associations are scarce within farm communities (see chapter 7.7).

The most important social capital source for farm dwellers in this study is represented by the church, with almost all interviewees being affiliated to different types of churches. The church helps farm dwellers to cope with their constrained living conditions through spiritual guidance and material or financial support in times of need. Moreover, church meetings within but also outside the farm area link farm dwellers with people from other church groups, providing a platform for information exchange and social capital building. ATKINSON (2007: 147-148) also stresses the powerful potential of churches in rural and farming areas. Since many farm owners and farm workers have ongoing experiences with church activities, the church provides a trusted institutional base on which development programmes could be built. Indeed, some religious organisations[29] run extensive and successful development programmes on farms, but not in the farm area under investigation.

Besides church membership, the majority of farm dwellers (81.1% of men and 56.3% of women) are not engaged in any other group activities, mainly due to limited available structures and low organisational capital. Involvement in voluntary saving associations*, such as stokvels* is low (14.5%) (see chapter 7.7.2). While these associations play a significant role as mutual aid structures in the economic life of many South African communities (UNDP 2003:85), they hardly exist on commercial farms in South Africa (WEGERIF / RUSSELL / GRUNDLING 2005: 148-149).

With regard to civil society interventions, the only intervention that has taken place in the farm area under investigation is a skills development programme for female farm dwellers initiated by the FLAGH programme of the North-West University. Focussing on sewing and later on management and marketing skills, this project aims at creating alternative income sources for women. During recent years, there have been an increasing number of civil society interventions (NPOs, NGOs and other CSOs) in the

[29] For example, Project Amos (http://www.amosafrica.net/sa/).

agricultural sector[30] (ATKINSON 2007: 142, KRUGER 2006: 6). However, according to ATKINSON (2007: 146-149), these interventions are mostly underfunded, poorly coordinated, fragmented across the country and badly integrated within government institutions.

Beneficiaries of the restitution process in the farm area have established a group which regularly meets to discuss and enforce the development of the farm and the future usage of land by beneficiaries. However, considering the slow pace of change within the farming structure and slow or no improvements of living conditions, the group's future effectiveness is questionable, predominantly due to a lack of capacity and post-settlement support structures. In this respect, LAHIFF (2008: 20) argues that in order to be successful, large community groups require substantial support over a prolonged period, involving both productive activities and the effective administration of community property institution. However, up to now support by local municipalities, provincial Departments of Agriculture and the provincial offices of the National Department of Land Affairs has not been as effective as expected (LAHIFF 2008: 20).

Results of this study further show that two farm dwellers appear to be in a municipality committee, but a clear understanding of their roles as members within the committee and the functions of the committee as a whole is missing. This situation portrays the low power and dysfunction of local governance within the farming sector as is also observed by ATKINSON (2007: 159-160). Most municipalities located in urban areas and their urban councillors have little knowledge or understanding of, or even interest in, rural and farming areas. Including farm dwellers' voice into local governments will be a key component in achieving better service deliveries in farming communities and thus, would enable farm dwellers to achieve better livelihood outcomes.

Missing rural-urban linkages, low organisational capacities and low rates of unionisation will remain the main obstacles in the future, inhibiting farm dwellers from engaging in political processes and reducing their vulnerability. In this respect, also the South African Human Rights Commission (2003: 29) reveals very low rates of trade union membership among farm workers, counting between four and six percent. Reasons are attributed to the restricted access to farms, employers preventing workers from joining unions, and workers not joining because of fear of harming their relationship with the farmer. Additionally, large distances between farms, lack of transport and funds, low literacy levels and leadership issues are the main difficulties faced by farm worker unions. Missing labour unionisation, however, results in a continuing lack of compliance with labour legislation in the agricultural sector (SAHRC 2003: 29).

[30] Civil society interventions in the agricultural sector are, for example Nkuzi Development Association (http://www.nkuzi.org.za); Rural Development Network - RUDNET (http://www.rudnet.org.za); Hlokomela/Hoedspruit Training Trust (http://www.htt.org.za); Women on Farms Project (http://www.wfp.org.za)

On the three commercial farms in this study, it has been found that the farmer-farm worker relationship follows the pattern of traditional paternalism which is described as "an 'organic' conception of the farm as a family, with the farmer occupying the central position of unchallengeable authority" (DU TOIT 1993: 314). As results in chapter 7.2.6 reveal, the relationship between the farm owner and his workers is characterised by unequal power dynamics, with the farm owner having the power and control over farm dwellers' working conditions and private lives, and farm dwellers being strongly dependent on the farm owner because of the isolation of the farm set-up. Other studies also confirm that paternalistic power-relations remain prevalent on many farms in South Africa, despite economic modernisation and new labour and tenure legislations (EWERT / HAMANN 1999, DU TOIT / ALLY 2003). In fact, existing structures in the farming sector are continuously changing and a form of 'neo-paternalism' has emerged, fusing state regulations and legislation into the spirit of paternalism (EWERT / HAMANN 1999: 202). Findings of this study reveal that the majority of interviewees perceive the farm owner as very supportive, particularly with regard to financial and food assistance. Taking into account that government interventions until now have greatly failed to improve the situation of farm workers, the role of the farm owner cannot be underestimated (ATKINSON 2007: 97). As long as no other structures are in place, farm owners remain important role players in rural development. There is a great potential in using the social capital of farmer-farm workers relationships for the development of farm dwellers' human capital, particularly with regard to empowerment and skills development. As revealed by ATKINSON, many farm owners are eager to provide training to their workers, which many workers willingly receive. This is a valuable opportunity for new co-operative relationships between farmers and workers (ATKINSON 2007: 249). Moreover, these co-operative relationships can also be used for the implementation of farm equity share schemes and other forms of joint venture, which can positively impact on livelihoods and the general 'empowerment' of farm dwellers, particularly if they advocate land reform and equitable social change (DU TOIT / ALLY 2003: 53).

The rationale of farm dwellers' low social capital involves multiple dimensions. On the one hand, restricted physical capital of farm dwellers which is characterised by isolation, small communities, missing venues for social gathering and limited access to education and information, inhibits farm dwellers to take part in South Africa's larger society. On the other hand, low human capital with high illiteracy rates, feelings of disempowerment and dependency directly impact on social capabilities and hamper collective action and unionisation.

8.1.6 Livelihoods from the perspective of farm dwellers

This research shows that farm dwellers have limited capacities regarding all five livelihood assets, resulting in multi-dimensional aspects of poverty. Nonetheless, most farm dwellers have lived on farms most of their lives, with two thirds of farm dwellers being born on commercial farms and 85.5 percent having lived and worked on other commercial farms before coming to the study area. On average farm dwellers have lived for 11.2 years in the farm area under investigation. Birth place and previous farm stays are mostly within a radius of less than 50 kilometres, indicating that farm dwellers predominantly move within the same area. A similar picture is observed by WALDMAN (1994: 18) who describes high mobility within farm areas, but highlights that most farm dwellers are confined to the farms and stay within the same social stratum (WALDMAN 1994: 18). In this study, 43.9 percent of farm dwellers have lived and worked in urban areas before. However, most of them were engaged in low income activities or were unemployed, not achieving a better quality of life compared to the farms.

Findings on farm dwellers' perceptions regarding their life on farms show that inadequate accommodation and sanitation, lack of basic infrastructure and services (shops, health, social services, transport) and low incomes are among the major issues of concern (see chapter 7.2.5). During focus group discussions (see chapter 7.3.1) farm dwellers further stressed major worries regarding their dependency on the farm owner, the lack of education and information, mistrust within the community and future insecurities in connection with the land redistribution process. Women in particular highlight conflicts and disagreement with their partners. Although literature about farm dwellers' perceptions regarding their living conditions is very limited, this observation is in line with available studies (VAN DONGEN 2003, WEGERIF/ RUSSELL / GRUNDLING 2005: 102, ATKINSON 2007: 100-105).

On this account, it is not surprising that half of all interviewed farm dwellers (53.6%) wish to live somewhere else, preferably in urban areas (81.1%). Findings show that farm dwellers associate three main perceptions regarding life in urban areas: (1) availability of more and better paid jobs; (2) accumulation of own properties and tenure security; and (3) general improvement of quality of life, having more possibilities and achieving independence. The question remains why farm dwellers, who wish to live in urban areas, do not move there. One possible answer might be the weak urban linkages and a lack of opportunities to move. Also their lack of confidence and lack of skills might inhibit them to make the decision, fearing unemployment and greater poverty. Moreover, and perhaps most important, most farm dwellers are used to the farm life, have established strong social support networks, and have adopted specific strategies to secure their livelihoods within the farm environment. Albeit their life is constrained by many factors, starting a new life in a totally different surrounding without appropriate support structures, such as kin helping to find jobs and accommodation, is far too risky.

In fact, this study reveals that the majority of farm dwellers (71.6%) like the farm life. For them, life on the farms has a number of advantages, including food provisions and support from the farm owner, the availability of free or cheap accommodation and the existence of job opportunities. Moreover, farm dwellers appreciate low crime levels on farms and perceive the farm environment as quiet and peaceful. Similar findings about perceived advantages of farm life are revealed by WEGERIF, RUSSELL and GRUNDLING (2005: 100-101) who also stress that the motivation behind the preference of staying on farms entails access to assets (food, natural resources, and farmers' provisions) and employment, appreciation of low crime levels and quietness, and feelings of belonging.

It can be seen that most farm dwellers are well aware of their constrained living conditions, but at the same time many of them appreciate certain advantages of their life on farms. This positive attitude and the affiliation to the agricultural sector should be much more nurtured within existing development programmes, but also in the current land reform process. As LAHIFF (2008: 4) points out, "not all farm workers would like to be farmers". Therefore, future programmes need to improve tenure security, enhance general living conditions and improve the social and human capacities to empower farm dwellers to fight their own vulnerability (LAHIFF 2008).

8.2 Always at the margin: Household food security on farms

Taking into account constrained living conditions and poor livelihood assets of farm dwellers, it is not surprising that every second household (52.3%) in this study is categorised as food insecure (see chapter 7.4). Two thirds of all interviewed households (65.9%) experience worries of not having enough food for the next day and every second household with children experiences food shortages that affect their children. On average, farm households have 5.7 food items in the house, mostly *mealie meal*, sugar, tea and vegetables like tomatoes, onions and cabbage. This is considerably below the average amount of food items (mean 9.0) available in South African households (MAUNDER / LABADARIOS 2000: 502).

Already a decade ago, LABADARIOS and NEL (2000: 167) revealed that stunting and underweight rates among children living on commercial farms are higher compared to other children in South Africa. Findings of VORSTER et al. (2000: 513) showed that farm dwellers have the worst nutritional status of all population groups in the North West Province, which was confirmed by LEMKE (2001) who reported that half of all farm worker households in her study were food insecure. It is therefore of concern that up to today the situation has not improved, as results of this study reveal. This is also confirmed by KRUGER et al. (2006: 3-4), revealing that 24.5 and 19.1 percent of children living on commercial farms in the North West Province are stunted and underweight, respectively.

Although farm dwellers are working within agricultural food production, they do not have direct access to these products. Only a few farm dwellers in this study keep livestock (33.3%) or grow vegetables (21.7%) for their own purposes; however, production is far from reaching a subsistence level. Therefore, food security mainly depends on the purchasing power of the households and not on subsistence agriculture. In this respect, the situation of farm dweller households does not differ much from other households in South Africa. According to CHOPRA, WHITTEN and DRIMIE (2009: 15), most South African households, also in rural areas, are deficient food producers and their access to food is determined by the household's direct or indirect access to cash for purchasing food. Thus, low farm wages and missing income alternatives, particularly for women, greatly impact on household food security of farm dwellers. In addition, limited shopping facilities in the farm area, which include small grocery stores, *tuck shops* and a monthly local market, only offer small assortments of foods and goods with prices about 45.1 percent higher compared to urban areas (BATEL 2006). However, farm dwellers rely on these on-farm shops because transport to supermarkets in towns is unreliable, irregular and expensive. Against this background, the vast majority of farm dwellers (81.8%) in this study have problems of obtaining certain types of foods, mostly meat, vegetables and fruit, because they are either not available in the farm shops or too expensive. As a result, unbalanced diets with low food diversity shape farm dwellers nutritional situation, being one reason, among others, for the high stunting rates of children living on commercial farms.

A very distinct feature with regard to household food security on farms is the provision of free or subsidised food rations by the farm owner, mostly entailing *mealie meal* and sometimes milk, seasonal fruit and vegetables. These monthly provisions prevent many farm worker households from running out of food. While food rations were previously part of the payment in-kind, with the introduction of minimum wages in 2003 many farm owners cut down these benefits (KRUGER et al. 2006: 6, LEMKE / BELLOWS / HEUMANN 2009: 201). This, indeed, contributes to the vulnerable position of farm dwellers regarding food and livelihood security.

Only one household in the informal settlement was categorised as food secure, having sufficient food available at all times regarding quantity and quality, whereas half of the study sample was characterised as *relatively* food secure, having enough food but only a limited quality of food. This is largely due to the lack of infrastructure and basic services within the farm area which contribute significantly to food insecurity and the low nutritional status among farm dweller households, a situation also confirmed by KRUGER et al. (2006: 4). Moreover, the lack of health care and health education and inadequate sanitary facilities further increase the spread of infectious diseases and the risk of malnutrition (UNICEF 1998, WHO / UNICEF 2000: 5). Low educational levels, particularly among women farm dwellers, negatively impact on their family's health and nutritional well-being, too (SMITH / HADDAD 2000). The devastating economic and social impacts of HIV/AIDS on farm households can further negatively affect their food security because loss of income and lower abilities to purchase food, and the break-down of social networks (see chapter 7.3.4).

The fact that almost half of all farm households in this study are categorised as relatively food secure, shows that a certain degree of security can be achieved even within the constrained setting on farms. As results in chapter 7.4.4 illustrate, household food security appears to be influenced by intra-household dynamics, with the majority of conjugal households (62.5%) being insecure while the majority of female-headed households (66.7%) appear to be relatively food secure. This confirms that women's status within the household, defined by decision-making power and control over resources, influences their families' and children's nutritional well-being (SMITH et al. 2003: 14). Women, compared to men, tend to spend their income over-proportionately on food for their families and thus, women's incomes are more strongly associated with improvements in health and the nutritional status of their families than men's income (QUISUMBING et al. 1995: 9).

Relatively food secure households are characterised by smaller household sizes, a smaller number of income earners, higher household per capita income, and more food diversity and food production. Results further reveal that household food security differs per farm setting. On all three commercial farms between half and almost two thirds of all households appear to be food insecure, while the majority of households in the informal settlement are relatively food secure. Although data from the informal settlement is biased due to a small selective sample, it shows that the different social

structure in the informal settlement may positively impact on household food security. In this respect, especially the absence of power relations between farm owner and farm worker, the availability of different income sources, relatively secure tenure rights, stronger urban linkages and broader social capital resources might lead to more available opportunities and capacities to achieve better food security.

Considering that the South African Constitution declares the right to have access to sufficient food and water for everyone, achieving this right for farm dwellers still remains a challenge. In this regard, the SAHRC (2003: v) highlights that the realisation of access to adequate food is constrained by the high levels of poverty experienced in farming communities. Government programmes, like the Primary School Nutrition Programme, are not operating at optimal levels in farming communities to assist children in accessing food (SAHRC 2003: v).

Since poverty and food insecurity are deeply interlinked concepts, causes for food and nutrition insecurity on farms are as much multi-dimensional as the causes for livelihood insecurity. ALTMAN, HART and JACOBS (2009: 358) urge that policy interventions for better food security in South Africa need to be placed within the overall objective of reducing poverty with a strong focus on human development. Particularly with regard to farm dwellers, not only adequate infrastructure and access to basic services but also education, skills development and empowerment of both men and women will be the driving forces to achieve better food and nutrition security. Moreover, promoting small-scale and subsistence agriculture can contribute to household incomes and lead to higher food diversification (ALTMAN, HART and JACOBS 2009: 358), having positive impacts on both food and livelihood security.

8.3 No place for women on farms: The vulnerability of female farm dwellers within the community and the household

While all farm dwellers are exposed to constrained working and living conditions, the position of female farm dwellers is even more insecure. In this study, the majority of households are conjugal households (55.1%), consisting of a male farm worker, his wife and children. Since permanent work contracts are mostly assigned to men, the status of most women is largely determined by their relationship to a male worker. Thus, most women have a secondary status on farms, having no claims on permanent employment or housing provided by the farm owner, having lower wages, and no access to certain rights and employment benefits. This vulnerable position of women living on commercial farms has been observed all over South Africa (DAVIES 1990, WALDMAN 1994, WALDMAN 1996, WALDMAN / NTSEDI 1996, KRITZINGER /VORSTER 1998, SHABODIEN 2006). It is further argued that women are also largely excluded from general agricultural and management training sessions in the farming sector (KRITZINGER / VORSTER 1998, SHABODIEN 2006), leaving them invisible and disempowered.

Nevertheless, women on farms are not totally powerless and have adopted certain coping strategies. As findings in chapters 7.2.1 and 7.2.2 reveal, women draw on several income generating activities (mean 1.6), including seasonal work, remittances, informal trade and off-farm employment. Half of all interviewed women also receive child support grants which constitute the most secure income for women with which they are able to care for their children and for themselves, independently from their partners. Child grants further enable women to stay with their children rather than sending them into the care of relatives who are better off (GOLDBLATT 2005: 254). Having these different income sources, women's earnings (ZAR 591.0) are not much lower compared to the regular and more secure income of men (ZAR 671.3). However, most income sources of women are insecure and fragile and do not enable them to move out of poverty and dependence on men. Besides missing opportunities, women's high workload with household chores and child care hinders them to engage in generating alternatives (DAVIES 1990: 24).

In this research women, relative to men, have stronger social capital resources. Results in chapter 7.7.2 show that more women (43.7%) appear to be engaged in group activities than men (18.9%). Moreover, focus group discussions revealed that women use their social capital in more creative ways than men to respond to constrained conditions. Women's response strategies include asking relatives for help, exchanging food with neighbours, starting their own small business, asking for small credits (from shop owners, farmers, or loaners), and investing in funeral societies and *stokvels*. In contrast, men's strategies mainly focus on support from farm owners and neighbours (see chapter 7.3.1).

Given the high level of poverty on the farms and dependency of women on men, sexual exploitation is widespread on commercial farms (DAVIES 1990: 25, WALDMAN 1994, WALDMAN / NTSEDI 1997: 104). Findings of this research also reveal that there are incidents where women might engage in sexual relationships for material or financial benefits (see chapter 7.3.4) or might have to endure sexual harassment by their employers because of fear of losing their jobs (see chapter 7.2.6). Cases of rape have even been reported by women. In this regard, WALDMAN also highlights the dire situation of sexual violence and rape on farms. Many women and girls experience real fear of sexual violence from men and boys, while men often perceive that they have the "right to ask, demand and finally claim through force, access to a woman's body" (WALDMAN 1994: 12).

Intra-household dynamics strongly determine how well available resources can be used to secure adequate nutrition and livelihoods. Qualitative analysis showed that households are more likely to achieve food and livelihood security when partners equally share their resources, take decisions jointly, and support and trust each other. On the contrary, the high dependency and low decision-making power of women, conflicts and domestic violence, as well as alcohol abuse and multiple relationships impact negatively on farm households' livelihoods.

Although some conjugal farm households seem to be characterised by cooperative relationships between partners, results of this study reveal that women regard conflicts and disagreements in their relationship as one major trouble in their lives (see chapter 7.3.1). Women report incidents of domestic violence, which are mostly linked to alcohol abuse (see chapter 7.3.3), a situation observed on many other commercial farms all over South Africa (DAVIES 1990: 25, WALDMAN 1994, WALDMAN / NTSEDI 1997: 104, KRITZINGER / VORSTER 1998: 336). Women are less powerful than men and domestic violence and sexual abuse is used by men to assert their self-esteem and take out their frustrations about the oppressive paternalistic farm structures (DAVIES 1990: 25, WALDMAN / NTSEDI 1997: 104). Physical and sexual abuse further contribute significantly to women's vulnerability to HIV/AIDS (see chapter 7.3.4). In this study, conflicts and distrust in relationships are also reflected by the low level of emotional and caring support between partners (see chapter 7.5.4). Only every third man or woman discusses important matters with their partner. While many women (41.7%) turn to their partners for seeking advice, most men (81.3%) rely on their female partners when they are ill for short periods. Only every third man and every eighth woman can expect care from their partners during times of longer illness. Thus, particularly HIV/AIDS has severe impacts on household composition and dynamics. Conversely, findings of the network analysis show that the majority of farm dwellers perceive the emotional bond to their partners as very close (see chapter 7.6.2). Moreover, potential support relations to the partner have the highest multiplexity compared to other alters (see chapter 7.6.7).

In conjugal households on the farms observed, women are responsible for the management and expenditure of household income. They receive a great part of their partner's income (on average 72.9%) and have to ensure that there is food and other necessities throughout the month. Although men tend to hand over their money to women, it does not guarantee women the power to spend the money (WALDMAN 1994: 15). Despite the fact that women make decisions regarding small purchases, there is no evidence that they have much power in other decision-making processes. As findings in chapter 7.5.3 show, men and women have different perceptions regarding decision-making in the household. The majority of women (69.9%) state that they make more decisions alone than together with their male partners. Most men (40.6%), on the other hand, claim that most decisions are made jointly by both partners. In this respect, it appears that both partners have distinct roles in the process: While men are the traditional head of the household (VAN DER VLIET 1991, BANK 1994) and the main income earners, they ultimately hold the power regarding decision-making processes. However, women are the ones held responsible for the household and the family's well-being. Thus, women most likely decide on most daily issues; yet, they rely on men's income and general agreement. Other studies on commercial farms reveal that women mostly control household expenditure and thus have some autonomy regarding certain household decisions; however most women are excluded from long-term financial decisions (KRITZINGER / VORSTER 1998: 336, WALDMAN 1994: 15, SHABODIEN 2006: 2). Moreover, qualitative analysis of data reveals that women are particularly dissatisfied with the money-spending patterns of their partners, who often 'waste' money on alcohol or other women.

The variety of qualitative data collection methods applied in this study enabled in-depth insights into intra-household dynamics, revealing ambivalent gender relations and different perceptions of men and women. It comes to the fore that despite disaccord and conflicts in many households, partners strongly rely on each other and on each others' resources, which might be due to the fact that other livelihood opportunities are very limited in the farm area.

Findings in chapter 7.5.1 show that perceptions regarding marital status differ greatly between men and women. While most women (55.6%) define their relationship as a partnership, the majority of men (72.2%) reported to be married by customary law. Taking into account that most relationships are long term relationships (mean 15 years) in which men and women live together in one house, have children and share resources, most men may not want to define their relationship as a partnership as it does not fully express the type of relationship they have. Women, on the other hand, define their relationship as a partnership as long as their partner has not paid the *lobola* (bride wealth). For women, this is an important step in a relationship because through the payment of *lobola,* the woman is traditionally withdrawn from her family and becomes a member of her husband's family. This phenomenon also occurred in a study by ICRW, HSRC and AfD (2008: 46), reporting that the legal definition of

marriage does not necessarily reflect its social meaning for men and women which complicates the classification of marital status. In general, marriage among farm dwellers does not seem common. The main reasons for women not to get married is the fear of being controlled and abused by her partner (38.7%), further reflecting unequal power relations between men and women. In contrast, most men (45.9%) do not want to or cannot get married because they do not have the financial means for the *lobola* payment.

Many South African women regard singlehood as a safer way to secure their own and their children's well-being (JONES 1999, LEMKE et al. 2003). However, due to gender-biased farm employment and the resulting dependency on men, there is no livelihood-base for single women on farms except for being domestic workers, pensioners or being linked to a household with a male farm worker. Nonetheless, it should be noted that these circumstances are specific to the crop and cattle farming sector. Other sectors, such as flower or poultry farms, predominantly employ women (SITHOLE 2005, VAN ROOYEN 2006) who then have a regular income and are most likely able to stay independent from men, forming mainly female-headed households. In this study, female headed-households are mainly found in the informal settlement (see chapter 7.1.2). The situation in the informal settlement differs from the commercial farm set-up. Here, inhabitants are not under the control and regulations of a farm owner in terms of housing and household formation. Compared to conjugal households, female-headed households in this study tend to be better-off economically and nutritionally, with higher per capita income (ZAR 442.5) and a better state of food security (66.7% being relatively food secure). Applying multiple livelihood strategies, being independent from abusive male partners but also having the ability to build alternative and more complex household structures and cooperate with other households, may be the driving forces behind the success of female-headed households in the informal settlement.

Women play a significant role in determining power relations on farms and in allocating responsibility for the moral and reproductive aspects of farm life (WALDMAN 1994: 85). However, women's position on farms remains very insecure and is neither sufficiently explored nor included in current policy programmes. Despite post-apartheid changes in labour legislation and women's legal rights, women on farms remain in a vulnerable position, lacking the knowledge about their rights and access to legal institution that can support them. Moreover, the government's capacity is still too weak to adequately enforce and monitor the implementation of laws on farms (SHABODIEN 2006: 5). In addition, the majority of members in farm worker trade unions are permanently employed male workers. Although the number of female seasonal workers in South Africa's agricultural sector is rising, they remain completely unprotected and unorganised, with no target strategy to build consciousness and drive collective action by women (SHABODIEN 2006: 5).

8.4 A safety net or a spider's trap: The importance of social networks for household food and livelihood security

Using a network analytical approach, this research illustrates that support networks play a crucial role in farm dwellers' everyday lives and also in times of need (see chapter 7.6). On average farm dwellers' networks contain ten persons. Kin-related alters (64.6%) constitute the majority in the networks, with close kin, such as parents, siblings and grown-up children, having the highest share. Friends are the most frequent alters (18.6%) within the non-kin group. Non-kin networks are mainly concentrated on the same farm, being a vital social support source in farm dwellers' everyday lives. However, kin-networks spread wider, also reaching out to urban areas and neighbouring farms. Hence, they play a crucial role in linking people from different setups. The qualitative analysis of support relations to kin and non-kin in chapter 7.6.4 reveals that support between kin is much more complex and appears in almost every aspect of life, including support during severe livelihood shocks, such as sickness, retrenchment or eviction. In contrast, non-kin relations are more geared towards daily life assistance (e.g. help in emergencies, joint activities, watching each others houses and children). The importance of kin-relations within farm dwellers' lives is confirmed by other studies (WALDMAN 1994: 20, DU TOIT 2004: 997, DU TOIT 2005: 31, WEGERIF / RUSSELL / GRUNDLING 2005.).

Investigation with regard to the geographical distance of networks has shown that networks are narrow, with the majority of alters living within a radius less than 50 kilometres (89.0%) (see chapter 7.6.3). This situation highlights the severity of transport difficulties and limited financial means among farm dwellers which hinder them to maintain network ties that are further away. Thus, most networks are concentrated on commercial farms (61.6%), while networks to urban areas are limited (27.3%). Taking into account GRANOVETTER's theory on the 'strength of weak ties' (1973) and NARAYAN's theory on 'bonds and bridges' (1999), farm dwellers' networks are clearly characterised by strong social bonds within the farm community, building conglomerates with high social cohesion. However, these conglomerates are isolated from each other and relationships overcoming greater spatial distances hardly exist. This clearly disconnects farm dwellers from more powerful social groups and government structures, leading to exclusion from the larger society (NARAYAN 1999). The lack of 'weak ties' especially to urban areas restricts the flow of information and farm dwellers' opportunities to mobilise resources for social organisation and collective action (GRANOVETTER 1973). Alters with a middle economic status living in urban areas might form 'weak ties' which can provide information and enhance individuals' opportunities for more stability and sustainability with regard to food and livelihood security. However, these middle income urban actors only constitute 5.5 percent of the whole network. There are more alters with very low and low economic status in urban areas (20.8% of all alters), who might be able to provide help in emergencies, but

struggle too much with their own livelihoods so as to advance the situation of farm dwellers.

Since the majority of network actors live on commercial farms and within close proximity, it is not surprising that the networks are very homogeneous in terms of alters' economic status (see chapter 7.6.2). The majority of alters have a very low or low economic status, building a poverty-stricken network which only has limited resources to provide support to its members (DU TOIT 2005: 31). This might also be the main reason why networks of farm dwellers are characterised by a very low multiplexity of network ties (mean 1.24, out of 10; see chapter 7.6.7). Many actors do not have the financial and material capacity to support other actors in multiplex ways. Therefore, relationships are built with several actors, with each of them having few but significant supportive roles.

Data of the complete network analysis additionally confirms a closely-knit network among farm dwellers living on the three farms, which is characterised by high connectivity within the farm boundary and few inter-linkages between the different farms (see chapter 7.6.9). These inter-linkages are mainly characterised by kin relationships and occur predominantly between female actors, highlighting their essential role in overcoming greater spatial distances and linking different set-ups. Furthermore, the farm owner has a central position within each farm network which confirms prevailing paternalistic structures where the farm owner plays a crucial role in providing assistance. However, investigations into potential support networks show that the farm owner is mainly accountable for support with larger amounts of money (>ZAR 1,000), as most farm dwellers do not have alters in their networks with high economic status who could assist them in this manner.

This research explores the meaning of actual and potential support networks in the context of food and livelihood security among poor and marginalised farm communities in South Africa, describing network characteristics, sizes and composition. There are other studies applying similar methodologies in large surveys in southern California, China and Iran, having a quantitative focus on network structure of different groups (SCHWEIZER / SCHNEGG / BERZBORN 1998[31], LEE / RUAN / LAI 2005, BASTANI 2007), but not providing detailed data on linking social support networks with food and livelihood security. Hence, comparable data to the findings of this study regarding the use of potential and actual support relations are largely absent.

The use of networks in farm dwellers' everyday lives was explored by using actual support relationships, referring mainly to visits, money and food exchange, and the sharing of meals (see chapter 7.6.5). The exchange of small goods, such as matches or washing powder, plays only a minor role within actual support relationships. Visits

[31] The study of SCHWEIZER, SCHNEGG and BERZBORN (1998) gave many methodological inspirations for the study presented here.

between network actors are neither assigned to certain relationship roles nor form a particularly distinct role within the actual support network. In fact, visits are exchanged between most actors and are a necessary prerequisite for the establishment of other support forms. Yet, the further away alters live, the less frequently visits occur, indicating once more the difficulty of farm dwellers to link with people from other areas, particularly urban areas.

Findings with regard to money exchange stress that higher amounts of money, usually remittances, are exchanged with kin-related alters (ZAR 183.6), alters who live at a greater distance and alters who live in urban areas (ZAR 247.5). In most cases, these remittances are sent monthly or occasionally. They are non-reciprocal and mainly sent from men to women, involving distant partners or close family members. In contrast, lower sums of money are mutually exchanged between non-kin alters (ZAR 100.4) who live in the same farm community (ZAR 118.9). In most cases, these low-level money exchanges occur very frequently (daily to weekly).

The sharing of meals (with alters other than household members) is the only support relation which is particularly associated with non-kin alters, such as friends and neighbours. Moreover, the sharing of meals occurs mainly within the same farm community and among very closely-bonded relationships. In contrast, food items are mainly exchanged between kin-related alters and alters who live outside of the farm community.

In times of need, farm dwellers obviously draw on other networks than during their everyday lives. Hypothetical questions on potential support relationships (“Suppose you need…”) were employed to determine these coping networks (SCHWEIZER / SCHNEGG / BERZBORN 1998). Findings in chapter 7.6.6 show that the potential support network draws on a broader selection of alters. Compared to the actual support network, which is mainly assigned to close kin, potential support networks additionally include more extended kin, friends and farm owners. These coping networks are very narrow and located within a small radius to provide immediate assistance. However, when farm dwellers are affected by longer periods of illness or if they are evicted, they have available links to urban areas, which they can use during major livelihood shocks. Moreover, all potential support relationships are aimed at alters who are emotionally very close to egos, except for the farm owner and alters who are asked for lodging support in times of eviction. Clearly, in times of need, farm dwellers turn mainly to people they know well and whom they trust, with the chance of rejection being rather low.

Data of this research show that certain characteristics of farm dwellers can influence their network size (see chapter 7.6.1) and the usage of specific support forms (see chapter 7.6.8). Characteristics that influence farm dwellers’ network formation are ego’s place of residence, age, distance to birth place and state of household food security. In

contrast, length of stay on the farm, level of income and household category do not influence certain network formations.

Farm dwellers who live in larger farm set-ups, like Ouplaas and the informal settlement, tend to have larger networks within the area. This is due to the higher number of inhabitants, resulting in greater networking opportunities. Although farm dwellers of smaller farms only have small networks in place, they counterbalance these with spreading their networks to neighbouring farms. Moreover, the exchange of small goods appears to be particularly common within the informal settlement. This might be due to the fact that most people living in the informal settlement are not employed on farms and thus do not have access to the farmer's food provisions, resulting in less foods being available for exchange.

Data further show that farm dwellers' age influences their network size and usage. Younger farm dwellers (20-40 years) have larger networks on the farm (mean 5.4 alters) and share meals with more alters (mean 3.1 alters) compared to farm dwellers aged above 60 (mean 3.2 and 1.1 alters, respectively). This points out that older farm dwellers may rely to a lesser extent on support networks, because they receive pension grants which enable them to secure their livelihoods.

Moreover, meals are predominantly shared among farm dwellers being born in close proximity because they most likely have more close relationships, which is the basis for sharing meals. In contrast farm dwellers being born further away tend to have more exchange of small goods, because they might have stronger relationships to urban areas which predominantly provide small goods.

Findings in chapters 7.6.1 and 7.6.8 further show that farm dwellers in food insecure households have larger networks (mean 11.1 alters) and exchange food with more alters (mean 3.9) than farm dwellers in relatively food secure households (mean 9.8 and 2.5, respectively). Also the graphical analysis in chapter 7.6.9 shows that there are more food exchange relations between food insecure network actors than between relatively food secure actors. The latter tend to be less connected and their exchange relations concentrate on a few and mostly kin-related actors. In contrast, most food exchange networks between food insecure actors are based on non-kin relationships and they also overcome greater spatial distances, linking the different farm settings. These findings clearly show that support networks have an important role in responding to ongoing financial constraints and food insecurities. Other studies in Georgia, Peru, the United States and Tanzania confirm that social networks help to cope with times of food insecurity and economic adversity (DERSHEEM / GZIRISHVILI 1998, DIAZ et al. 2002, MARTIN et al. 2004, SEILING 2006, HADLEY / MULDER / FITZHERBERT 2007).

Nevertheless, the fact that relatively food secure farm dwellers have a lower network activity might enable them to protect their food and livelihood security. In this regard, it is necessary to note that networks are held together by mutual expectations of benefits and reciprocity (UPHOFF 1999: 219). Also this study shows that the majority of all support relationships among farm dwellers assume reciprocity, especially among non-

kin alters within the farm community (see chapter 7.6.5). Therefore, only an 'obligation for reciprocity' ensures reliable and long-term support relationships. A similar assumption has been made by CASHDAN (1985) who compares reciprocity in networks to a form of insurance that protects its members against economic loss. At the same time, the 'payment' for this protection is the obligation to assist when someone is in need (CASHDAN 1985: 456). However, considering that networks of farm dwellers in this study are very homogeneous regarding low economic status, in the long term, this 'obligation for reciprocity' may hinder the achievement of better food security and livelihood outcomes. According to DU TOIT (2004), networks play an important role for the survival of farm dweller households, but at the same time these networks also have oppressive and exploitative dimensions, which may involve serious internal disparities in entitlements and power. Similar findings to this study were reported by SPIEGEL (1995: 105) who highlights that people with relatively secure livelihoods tend to engage less in reciprocal assistance and have lower network activities.

The findings of this study show that support networks are an important strategy to respond to ongoing food and livelihood insecurities; however, they do not have the capacity to achieve sustainable economic and nutritional well-being of poor households, such as farm dweller households. This is confirmed by ADATO, CARTER and MAY (2006) who state that relations among poor households at best seem to stabilise livelihoods at low levels, but do not improve long term economic advances and upward mobility. While active social capital and networks are helpful for non-poor households (ADATO / CARTER / MAY 2006), their role needs to be regarded with caution among poor households. As findings of this research stress, farm dwellers are extensively engaged in network activities during their everyday lives, however, they are not able to use these networks for better social organisation and collective actions in order to enforce better livelihood outcomes. An explanation for this might be the absence of bridging ties to broader structures and civil society on the one hand, and the general absence of livelihood assets such as financial, physical and human capital on the other hand, both trapping farm dwellers in poverty and vulnerability.

8.5 Who are the better networkers: Gender and networks

Gender differences between networks exist in several ways. With regard to the general network size (see chapter 7.6.1), it appears that women have slightly more alters (mean 11.2) compared to men (mean 9.8), albeit not significantly. Women also tend to have more visiting relationships than men (mean 9.0 and 7.2, respectively) and, as revealed by the graphical analysis (see chapter 7.6.9), female networks overcome greater spatial distances and link different farm set-ups. One reason for the slightly higher network size and wider outreach of women might be the fact that they have more time available to nurture support relationships within and outside of the farm through visits, because most of them do not have a full-time job. Moreover, the composition of male and female networks differs, with each having two thirds of alters of their own gender (see chapter 7.6.2). Gender homogeneity seems to be a common feature in social support networks and has also been described in the United States and Iran (SCHWEIZER / SCHNEGG / BERZBORN 1998, BASTANI 2007). Findings in chapter 7.6.2 further reveal that women's networks rely much more on the support of neighbours than those of men. In contrast, men rely more on farm owners. This highlights the fact that men can directly approach the farm owner due to their employment conditions, whereas most women do not have direct access to him.

This research also revealed that certain support forms are clearly gender-biased (see chapters 7.6.5 and 7.6.6). Men usually provide advice during times of need and insecurities. Also, exchange of money appears to be a man's domain. Men do not only tend to exchange money with more alters than women (mean 4.7 and 3.4, respectively), they also exchange larger sums of money (ZAR 187.1 and 132.8, respectively). In contrast, exchange of small goods, such as matches and soap, is particularly assigned to women, who exchange small goods with more alters than men (mean 1.1 and 0.5). The reason for this is that, compared to women, most men have a regular farm wage, which gives them cash at hand available for distribution within the network. Women, albeit having several income sources, do not have secure incomes. Therefore, the exchange of small goods compensates the lack of money within female networks. Moreover, according to QUISUMBING et al. (1995: 9), women predominantly spend their income on food for the family and hence, they might be more hesitant with money exchange relationships. Findings of this study also show that women are particularly responsible for support and care during shorter and longer periods of illness. This confirms women's part as caretakers in the family, which is particularly aggravated by the increased burden of HIV/AIDS (IFPRI 2005, URDANG 2006, FAO 2007b).

Nonetheless, there are no gender differences regarding support forms such as visits, sharing of meals, exchange of food items, assistance in reading and filling-in official documents, as well as discussing important matters.

The argument that women are the ‘better networkers’ because they primarily perform the essential tasks of connecting different people for support (DU TOIT 2005: 32), is not confirmed by the network analytical approach applied in this study. It becomes clear that men and women use social support networks in different ways, but both equally rely on these networks to cope with existing food and livelihood insecurities. However, the specific farm environment with its limited social resources and livelihood opportunities might be the main reason for this finding. Given the high number of female-headed households in South Africa which often achieve better livelihood outcomes due to social networks and cooperating household units (JONES 1999, LEMKE et al. 2003), it can be assumed that more social possibilities for women on farms could positively influence the use of networks for better food and livelihood security. Nonetheless, only comparable network data of other South African settings will shed light on gender differences in network formation and their impact on food and livelihood security.

9 CONCLUSION AND RECOMMENDATIONS

This research applies a mixed methods design, combining a qualitative enquiry with quantitative network analysis strategies to explore underlying social factors which affect household food security, livelihoods and the formation of support networks among farm dwellers in the North West Province of South Africa. As part of a larger research project which investigated the link between nutrition security, livelihoods and HIV/AIDS of South African farm worker households (Lemke 2005), the researcher undertook two interrelated sequent sub-studies, continuously visiting three commercial crop and cattle farms and one informal settlement located within the farm area from 2004 to 2008. Findings of the first sub-study (Heumann 2006) built the basis for the second study which is presented here. Employing a variety of data collection methods, such as structured open-ended interviews, in-depth interviews, focus group discussions and observations, living conditions and everyday life experiences of 37 male and 32 female farm dwellers in 49 households were explored.

This research confirms the dire situation of farm dwellers who belong to the poorest and most vulnerable population group in South Africa. In-depth investigations into farm dwellers' livelihoods document limited capacities regarding all five livelihood assets (physical, financial, human, natural and social capital) which are interrelated in complex ways, aggravating farm dwellers' capacities to achieve better livelihood outcomes.

The physical capital on farms is characterised by inadequate infrastructure and access to basic services, leaving farm dwellers marginalised and dependent on the farm owner. Access to electricity and water is not equally guaranteed on all farm settings, demonstrating municipalities' failure to provide services in rural farm communities. As a result, farm owners take over the responsibility of minimum service provisions on farms. In addition, farm dwellers face major challenges with access to primary health care facilities and access to education on farms is only provided by primary schools. High schools, adult education and other social service provisions are absent. Also, governmental or non-governmental education and awareness campaigns rarely reach the farm area. Regular transport opportunities are scarce and hinder farm dwellers to overcome the rural-urban distance to access basic services in towns and cities. The spatial isolation of the farm settings leaves farm dwellers literally out of sight and makes them invisible for most policy interventions. Moreover, the absence of basic infrastructure and services results in a lack of opportunities which hampers farm dwellers to take part in the larger society and to use available recourses to improve their livelihoods.

Tenure insecurity further increases the vulnerability of farm dwellers, making eviction one of the major livelihood shocks, which is not only accompanied with loss of income and housing, but also the breakdown of family and social structures. Since housing is mostly linked to permanent employment on farms, farm dwellers constantly face the

risk of eviction due to retrenchment, farm sale or conflicts with the farm owner. Characterised by informal tenure rights, the situation differs in the informal settlement in this study. However, since the land restitution, non-beneficiaries are in fear of eviction, too. New tenure laws preventing eviction and addressing the land rights of farm dwellers have been implemented within South Africa's land reform policy, but concrete policy initiatives and an adequate justice system are largely missing (Wegerif / Russell / Grundling 2005).

Despite the implementation of minimum wages in the agricultural sector in 2003, farm dwellers remain in the poorest income group in South Africa. This study observed that the monthly household income of farm dwellers is far below the national average and only two out of three farms meet the minimum wage requirements. Besides seasonal farm employment, which is primarily done by women, alternative income sources are scarce, including remittances, informal trade businesses and incomes from off-farm employment. Dependency on social grants is particularly high among vulnerable groups, such as women, elderly and sick people, constituting the most secure income for those who do not have direct access to farm employment. As a result, farm dwellers only have a restricted capacity to build financial stock, like savings or other investments, and to make long-term financial plans. Having only a very low financial capital, farm dwellers' ability to invest in other social capitals is limited and clearly inhibits the achievement of better livelihood outcomes.

Findings of this research confirm that farm dwellers' human capital is closely intertwined with their restricted physical capital. Having only limited access to education, illiteracy rates among farm dwellers in this study are strikingly high, forming a low-qualified labour class which has hardly any job opportunities outside of the agricultural sector. Taking into account that farm dwellers are excluded from current societal developments, they are often not aware of their rights and opportunities and miss valuable information to empower themselves. In addition, poor access to health care, low health education and inadequate sanitation facilities further contribute to a low health status. Findings in this study reveal that sickness and death are severe threats to the livelihoods of farm dwellers, accounting not only for high emotional and financial constraints but also for an increasing risk of eviction.

In line with other studies, this research confirms high alcohol abuse among farm dwellers and its severe and multiple impacts on their livelihoods. Isolation, destitute living conditions, lack of recreation facilities as well as a failure to see future perspectives and feelings of disempowerment are among the main reasons for the alcohol abuse. Moreover, findings of this study suggest that alcohol constitutes an important social component in farm dwellers' lives because it connects people from the surrounding areas who socialise at taverns and after church ceremonies. However, alcohol negatively impacts on farm dwellers' health and increases risky health behaviour (e.g. injuries due to alcohol-related negligence or assault, and increased HIV risk due to unprotected sex). It also threatens household's food and livelihood security, due to increased money spending on alcohol and less on food, causing financial

constraints and inadequate diets. Additionally, alcohol abuse also impacts on the community and household due to the increased potential of conflicts, crime and violence.

Given the infrastructural and financial constraints and the specific social environment on farms, this study emphasises farm dwellers' vulnerability to HIV/AIDS. In the study area, the matter of HIV/AIDS is determined by denial and silence, mainly caused by farm dwellers' limited knowledge and the high levels of stigmatisation and discrimination in the farm area. The case study of an HIV infected man confirmed that medical care and counselling for HIV patients are largely absent in the farm area and the most important assistance for HIV-affected households is the disability grant. The latter, however, has gained much criticism among South African scholars who report the trend that HIV-infected people refuse ARV treatment due to fear of losing the grant. This urgently calls for a better social grant targeting considering South Africa's high levels of poverty and HIV/AIDS (Richter / Hardy 2006, Leclerc-Madlala 2006).

Natural capital is a very distinct feature of South African farm dwellers. While living on agricultural land, farm dwellers' access to natural resources relies largely on farmers who are the legal owners of the land. This research reveals only a low level of agricultural activities among farm dwellers such as livestock keeping and the growing of vegetables that contribte to only a few household's food availability. Nevertheless, the possibilities of food production and collecting wild foods and firewood are forms of natural resources which most residents in urban areas do not have. It becomes clear that the current land reform process in South Africa poses an opportunity for farm dwellers to engage in subsistence or commercial farming. Perceptions of farm dwellers in this study disclose that some people aim for incomes through agricultural activities with small- or large scale farming. However, observations reveal only a slow pace of changes with regard to living conditions and agricultural structures. Results of this study thus confirm the picture of land reform in South Africa which still struggles with positive results regarding agricultural production and better livelihood outcomes (MOSELEY 2006, LAHIFF 2008). Also, the potential of farm workers' long practical experience and affinity to agricultural work are largely undermined by current land reform processes, leaving most farm workers with uncertainty of their future.

Social networks play an important role in the social lives of farm dwellers in this study, but other social capital sources are scarce within farm communities. The most important social capital source is the church which does not only provide spiritual guidance and financial and material support in times of need, but also builds a platform for social interactions within and outside of the farm area, facilitating information exchange and social capital building. Besides church membership, other group activities such as savings associations are scarce. Isolation, small communities, missing venues for social gatherings and limited access to education and information are the physical factors inhibiting farm dwellers from taking part in South Africa's civil society. Moreover, the low human capital with high illiteracy rates, feelings of disempowerment and dependency caused by paternalistic structures directly impact on

social capabilities and hamper collective action and unionisation. This is further portrayed by generally low rates of trade union memberships in the South African farming sector (SAHRC 2003), which aggravates the enforcement of labour legislations and policy interventions geared towards farm workers' needs.

This research further reveals that the relationship between farm owners and farm workers is strongly determined by paternalistic patterns. Despite economic modernisation and the introduction of new labour rights and tenure legislations, the relationship between the farm owner and his workers remains highly unequal on many South African farms. Farm owners in this study have control not only over working conditions but also over farm dwellers' private lives in terms of housing, medical support, transport, financial and material provisions. In turn, farm dwellers depend on farm owners' assistance because of the isolation of the farm setting and inadequate infrastructure and basic services. The existing paternalistic system puts farm dwellers in a vulnerable and disempowered position which prevents them from building organisational capacities and taking part in the larger civil society. Nevertheless, farm owners' support and their role in rural development should not be underestimated, especially since there are no other structures in place. There is much potential in the farm owner and worker relationship which could facilitate empowerment and capacity building of farm workers.

This study is one of very few in South Africa which includes farm dwellers' own perceptions regarding their living and working conditions. Farm dwellers are well aware of their constrained living conditions. They perceive inadequate housing and sanitation, the lack of basic facilities such as shops, health and social services, and limited means of transport as the major concerns in their lives. Other concerns are the dependency on the farm owner, the lack of education and information, mistrust within the community and future insecurities regarding the restitution process in the farm area. Urban areas seem attractive to most farm dwellers because urban life is associated with the availability of more and better paid jobs, own property and tenure security, and a better quality of life with more possibilities and independence. However, it appears that most farm dwellers remain on farms because they have established strong social support networks and have adopted specific strategies to secure their livelihoods within the farm environments. Moreover, many farm dwellers appreciate certain advantages of their life on farms, including food provision and support by the farm owner, free or cheap accommodation, existing job opportunities, low crime levels, and a quiet and peaceful environment.

The constrained livelihood conditions directly impact on farm dwellers' food and nutrition security. In this study every second household is categorised as food insecure, a picture congruent with other studies on nutrition and food security among farm workers in South Africa. Food security predominantly depends on the purchasing

power of households which, in this case, is restricted by low farm wages and missing alternative income sources, particularly for women, as well as limited shopping facilities in the farm area. Findings show that the majority of farm dwellers have problems with obtaining desired foods such as meat, vegetables and fruit, because these are either not available in the farm shops or too expensive. In addition, inadequate health care provisions and sanitation facilities increase the risk of malnutrition. On the other hand, farm owners' food provisions prevent many farm dweller households from running out of food. This highlights once more the important role of farm owners in terms of provisions in kind, although these have decreased with the implementation of minimum wages in 2003 (KRUGER et al. 2006, Lemke / Bellows / Heumann 2009).

Relatively food secure households in this study are characterised by smaller household sizes, smaller numbers of income earners, higher household per capita incomes, more household food diversity and food production. More female-headed households appear to be relatively food secure compared to conjugal households, reflecting women's important role in securing their family's and children's well-being. Also, households in the informal settlement tend to be better off in terms of food security, most likely due to the absence of unequal power relations between farm owner and farm workers, the availability of different income sources, relative secure tenure rights, stronger urban links and broader social capital resources which may offer more opportunities and capacities to achieve better food security.

South Africa's constitution has incorporated the right to adequate food for everyone (SAHRC 2003); however, this study confirms that its implementation has not yet reached marginalised groups such as farm dwellers. Achieving better food and nutrition security on farms will largely depend on general livelihood improvements with a strong focus on human capacities and empowerment.

This research highlights the vulnerable position of women on commercial farms, a situation also observed by other studies. On the three commercial farms in the study area, the status of most women is determined by dependency on men for access to income, housing and other benefits linked to farm employment. Nevertheless, women have adopted several strategies to cope with the constrained conditions, drawing on more income generating activities and making stronger use of their social capital, relative to men. However, livelihood opportunities are limited and incomes often insecure, thereby not providing a way out of poverty and dependency on men.

Findings also suggest that intra-household dynamics strongly impact on food and livelihood security of conjugal households. Available resources can be better used within the household when partners equally share incomes, make joint decisions and support and trust each other. While cooperative relationships between partners certainly exist within the farm area, findings of this study further reveal that many women regard conflicts and disagreements with their partners as one of the major troubles in their lives and also report incidents of domestic violence and multiple sexual

relationships of their partners, predominantly linked to alcohol abuse. Moreover, women often complain about their partners 'wasting' money on alcohol and other women instead of supporting the household. Mistrust within relationships is also portrayed by the low level of emotional and caring support between partners. On the contrary, within male and female support networks, relationships to partners are characterised by strong emotional bonds and high multiplexity, reflecting their important role as support-givers.

Comparing the perceptions of men and women in 18 conjugal households highlights disparities regarding household decision-making and marital status. Findings suggest that most women tend to describe their marital status as a partnership as long as their partners have not paid the *lobola* (bridewealth). In contrast, most men report to be married by customary law, probably because both partners live together, have children and share resources. Furthermore, most men claim that most decisions in the household are made by both partners jointly, whereas the majority of women report to make more decisions alone than together with their male partners. It is assumed that women most likely decide on the majority of daily issues to secure their family's well-being. However, since men are the main income earners, they hold the ultimate power regarding decision-making processes.

Although many partnerships in the farm area are long term relationships, lasting on average since 15 years, marriage does not seem very common in the study area. While most men cannot afford the *lobola* to get married, most women are afraid to be controlled and abused by their man once they are married, confirming once more unequal power relations and mistrust between men and women. In South Africa, many women form female-headed households to break out of dependency of men and ensure better livelihoods for their families (Jones 1999, Lemke 2001). However, due to gender-biased farm employment it was observed that single women cannot secure their livelihoods, but by having relations to male farm workers, by being employed as a domestic worker or by benefiting from a pension grant. In this study, the majority of female-headed households are found in the informal settlement where accommodation does not depend on farm employment. Compared to conjugal households, female-headed households appear to be better off economically and nutritionally. It is assumed that reasons behind this are multiple livelihood strategies, the use of complex and cooperating household structures as well as the absence of abusive male partners.

Overall, findings stress ambivalent gender relations on farms, which are characterised by a high interdependency on the partner's resources on the one hand, and mistrust and conflicts in many households on the other. Although women's legal rights are deep-seated within South Africa's constitution (KISTNER 2003), its implementation does not reach women on farms who remain in a vulnerable and dependent position.

This study applied a network analytical approach to determine the characteristics, sizes and composition of farm dwellers' support networks and their meaning in the context of

food and livelihoods security. Findings show that farm dwellers' support networks consist on average of ten persons, with two thirds of all network associates being kin-related. The highest proportion among them is close kin, including parents, siblings and grown-up children. Non-kin networks which mainly concentrate on the same farm are more geared towards everyday life assistance, for example temporary child care and help in emergencies. On the contrary, kin networks reach out to neighbouring farms and urban areas, linking people from different set-ups. Findings suggest that kin networks are more complex and assist farm dwellers in almost every aspect of life, and especially during livelihood shocks, such as sickness or eviction. Furthermore, the exchange of money differs between kin and non-kin networks. Higher amounts of money, usually remittances, are exchanged monthly or occasionally in a non-reciprocal way mostly from kin-related men to women, involving distant partners and family members. On the contrary, the money exchange between non-kin is characterised by a reciprocal exchange of smaller amounts of money at a higher frequency (daily to weekly). Findings also show that the sharing of meals (with alters other than household members) is particularly associated with non-kin alters living within the farm community, such as friends and neighbours, whereas the exchange of food items is predominantly linked to kin-related alters living outside of the farm community.

The majority of network associates live within a radius of less than 50 kilometres, reflecting farm dwellers' transport restrictions and limited financial means to nurture relationships at a greater distance. Hence, networks are characterised by strong social bonds within the farm community, but linkages to urban areas are weak. Based on GRANOVETTER's (1973) and NARAYAN's (1999) theories, findings suggest that the lack of 'weak ties' to urban areas disconnects farm dwellers from more powerful social groups and government structures, leading to exclusion from the larger society. Moreover, due to missing urban linkages, the flow of information and access to broader livelihood opportunities is restricted, inhibiting the mobilisation of social resources. This study also highlights that farm dwellers' networks are very homogeneous in terms of a low economic status, resulting in a network which has only poor resources for its members. It is assumed that this is one of the reasons why network ties are characterised by a low multiplexity, with farm dwellers having only a few but significant support roles to each alter.

The network analysis confirmed the farm owner's central role in farm dwellers' social life with regard to providing material and financial assistance, also reflecting existing paternalistic structures. In the potential support networks, the farm owner is mainly turned to when larger amounts of money (> ZAR 1,000) are needed. In most cases, the farm owner is the only alter in the network that has a high economic status and hence is the only one able to assist farm dwellers with such needs.

This research further reveals that actual and potential support networks differ in their composition and radius. Actual support networks used during every day life are mainly assigned to close kin and overcome wider spatial distances. On the contrary,,potential

support networks appear to be located within a small radius, calling upon a broader selection on alters.

In this study, it appears that the network size and use of different support forms is not influenced by factors such as length of stay on the farm, level of income and household category. However, certain characteristics of farm dwellers such as ego's place of residence, age, distance to birth place and the state of household food security seem to impact on network formation. Networks appear to be larger in farm communities with more residents, most likely because of greater network building opportunities. Nonetheless, farm dwellers on smaller farms counterbalance their smaller network size within the farm community by spreading their networks to neighbouring farms. Younger farm dwellers (20-40 years) have larger networks within the farm communities and tend to share meals with more alters, compared to farm dwellers aged above 60. It is assumed that the relatively high income of pension grants results in less dependence on immediate support networks. Findings further reveal that egos born in close proximity appear to share more meals with other farm dwellers in the farm community, but exchange less small goods, compared to egos that were born further away. The latter might have stronger relationships to urban areas which predominantly provide small goods.

Furthermore, this research highlights that farm dwellers living in food insecure households have larger networks and exchange food with more alters than farm dwellers living in relatively food secure households. Also, findings show that the food exchange relationships among insecure actors are based on non-kin relationships and overcome greater spatial distances, whereas food exchange relations of relatively secure actors concentrate on a few and mostly kin-related actors. Hence, social support networks have an important role in responding to ongoing financial constraints and food insecurity. However, considering that farm dwellers' networks are very homogenous regarding a low economic status, in the long term the obligation for reciprocity, claimed by most network actors, may trap farm dwellers into food and livelihood insecurity. Moreover, findings suggest that the absence of bridging ties to broader structures and civil society on the one hand, and the general absence of livelihood assets on the other, restrict farm dwellers to use their networks for better social organisation and collective actions in order to enforce better livelihood outcomes and challenge their vulnerability.

It is further emphasised in this study that networks between men and women differ in various ways. Although not significantly, women have a slightly higher number of alters and more visiting relationships in their networks compared to men. Male and female networks are also very homogeneous with regard to gender, with each having two thirds of alters of their own gender. In addition, female networks overcome larger distances and link people from different set-ups. This is probably because most women do not have a full-time job and thus have more time available for network activities. Findings also show that women rely much more on support from neighbours, while

men rely to a greater extent on farm owners, portraying men's direct access to the farm owner's assistance.

Certain support forms in this study are clearly assigned to gender. Providing advice and the exchange of money seem to be the responsibility of men, while the exchange of small goods and support and care during illness are usually linked to women. Other support forms do not show any gender differences. These include visits, the sharing of meals, exchange of food items, assistance in filling official documents and the discussion of important matters.

The assumption that women are the 'better networkers' is not confirmed by the network analytical approach applied in this study. Although men and women use their support networks in different ways, they both equally rely on these networks to cope with existing food and livelihood insecurities. This might be due to the specific farm environment with its limited social resources and livelihood opportunities, restricting particularly women to use networks for livelihood outcomes. However, only comparable network data of other South African settings will shed light on gender differences in network formation and their impact on food and livelihood security.

In the following section, general recommendations for future policy interventions and development programmes will be highlighted and an outlook for future research will be provided.

General recommendations

Based on the findings of this research, future policy interventions and development programmes that aim to improve farm dwellers' quality of life need to consider the complexity of factors impacting on farm dwellers' food and livelihood security, including persisting paternalistic structures, unequal gender relations, intra-household conflicts and chronic alcohol abuse. In addition, women's vulnerable position on farms needs to be addressed by policy makers.

Comprehensive participatory approaches are required to empower both male and female farm dwellers. In this respect, education and capacity development but also access to health, social and legal services are of particular importance to increase farm dwellers' human capital and thus provide them with self-assurance and greater perspectives and opportunities for better livelihood outcomes. Moreover, improving the public transport system will enable farm dwellers to overcome not only spatial but also social exclusion. Being connected between farms and to urban areas will help to broaden social networks and increase social capital, resulting in greater access to and exchange of any kind of support and information (e.g. with regard to health, labour rights or alternative income opportunities). Hence, mobility is closely linked with empowerment. While the land reform process is an important step towards equal land rights for all South Africans, it needs to be taken into account that not all farm dwellers

may become farmers on their own. Therefore, it is of utmost importance to further improve tenure legislation for farm dwellers and basic infrastructure on farms and in rural areas. In this respect, local municipalities must take more responsibility to drive forward rural development. The improvement of extension services may improve the accessibility of farm dwellers to certain services and information.

In October 2007, a final workshop organised by researchers of the larger research project (project leader: Dr. S Lemke) and the FLAGH programme (project leader: Prof. A Kruger) highlighted the need for better coordination and organisation of project implementations by different stakeholders on farms in the North West Province. Based on the workshop findings, the FLAGH FORUM was established which forms an independent body, coordinating and monitoring various community projects. The community projects are carried out by researchers, NGOs and Government Departments[32] and aim at improving the nutritional status, livelihoods, and the skills and knowledge of farm dwellers and other marginalised people living in poverty. Among them are school vegetable garden projects (including curriculum developments), a sewing project for women, adult basic education and training, and a glass recycling and paper bricks project. Moreover, a LIFEPLAN programme focuses on basic skills development and entails topics such as self-image, healthy relationships, communication and dealing with conflicts, leadership and HIV/AIDS. Also, the national dairy company CLOVER with its MAMA AFRIKA programme[33] sponsors a bakery project which supports women to bake bread and to sell it in the community. In addition, research continues within the field of nutrition, including a study of the effects of traditional and indigenous vegetables on the nutritional and health status of school children.

Outlook for future research

The study presented here is the first to give detailed insights into the role of social support networks to achieve food and livelihood security. Findings are very context-specific, reflecting the distinctive situation of farm dwellers in South Africa. Future investigation into social support networks in other sectors in South Africa is needed, including poor and wealthier communities, to give further insights into the role of these networks for food and livelihood security. Moreover, available social capital sources in farm communities require follow-up research, including the role of and problems regarding labour unionisation and their relevance for livelihood improvements of farm dwellers.

[32] Including the Departments of Health, Social Development, Education and Agriculture.

[33] http://mama-afrika.clover.co.za (accessed May 2010)

The matter of HIV/AIDS was included within this research because it has enormous impacts on the lives of farm dwellers. This study, however, only touches the tip of the iceberg, revealing only broad implications of HIV/AIDS. To explore the full extent of the impact of HIV/AIDS on farm dwellers' food and livelihood security as well as on social networks, more studies need to be designed with a specific focus on HIV/AIDS and an appropriate sensitive approach.

As this study shows, gender relations impact significantly on household food and livelihood security. However, findings also highlight a high complexity and ambiguity of intra-household dynamics, often reflected by differing perceptions of men and women. Future research into intra-household relations needs to consider different views of both men and women to prevent a one-sided portray of household dynamics. In addition, more light needs to be shed on social support networks between cooperating household units, giving more insights into household structures and existing fluid household boundaries in contemporary South Africa.

The findings obtained in this PhD study as well as in the larger research project form the basis of a follow-up project entitled "Food security and right to adequate food in the context of land and agrarian reform in South Africa" (Lemke 2010). Applying participatory action research and a rights-based approach, in cooperation with local NGOs, the impact of land and agrarian reform on food and nutrition security will be explored, focusing on local food systems and marginalised vulnerable groups, like emerging farmers, farm workers and especially the women among them.

10 SUMMARY

Since the transition to democracy in 1994, South Africa's government has attempted to improve the working and living conditions of farm dwellers through laws on fair labour practises, minimum wages, land reform and tenure security. However, farm dwellers remain among the most deprived and marginalised population groups.

Using a mixed methods approach, this study focuses on underlying causes of food and livelihood insecurity and the importance of social networks among 69 farm dwellers. From 2004 to 2008, research was carried out on three commercial farms and one rural informal settlement in the North West Province employing a variety of methods, such as in-depth and structured open-ended interviews, focus group discussions and observations. This study is part of a larger research project which investigated the link between nutrition security, livelihoods and HIV/AIDS of farm worker households.

Farm dwellers are trapped in a vicious cycle of low financial assets, restricted physical access to services and livelihood opportunities, low health and educational levels, low social resources and dependency on the farm owner. Tenure insecurity, high vulnerability to HIV/AIDS, alcohol abuse, gender-related conflicts and the disempowerment of women further compromise food and livelihood security. Since permanent employment is mainly linked to men, women are dependent on their male partners not only for income, but also for housing and benefits. Women draw on more income and social capital sources compared to men, but this does not enable them to break out of dependency. Every second household (52.3%) is categorised as food insecure, with more conjugal households (62.5%) being insecure than female-headed households (33.3%). Social support networks of farm dwellers consist on average of ten persons, who are mainly kin-related (64.6%) and live within a radius of less than 50 kilometres (89.0%). Network formation is influenced by gender, place of residence, age, distance to birth place and household food security, and not by length of stay, income and household category. The farm owner plays a central role, particularly regarding material and financial assistance, confirming existing paternalistic structures. The majority of network actors have a low economic status, resulting in overall limited network resources. While support networks help to overcome times of economic insecurity and food shortage, the obligation of reciprocity may trap farm dwellers into food and livelihood insecurity in the long term. Apart from the church, other social groups are scarce, mainly due to limited infrastructure and low organisation capital. The lack of linkages to urban areas and more affluent households restricts farm dwellers' access to information and opportunities to mobilise resources for better livelihood outcomes.

This in-depth research reveals the complexity of factors impacting on food and livelihood security of farm dwellers, highlighting paternalistic structures, gender dynamics and conflict, limited social capital and existing social networks. Participatory strategies aimed at capacity development and empowerment are required to enable both men and women to build on existing resources and to challenge their vulnerability.

11 ZUSAMMENFASSUNG

Seit Beginn der Demokratie 1994 versucht die Regierung Süd Afrikas, die Arbeits- und Lebensbedingungen von Farmbewohnern durch die Einführung von Arbeitsschutzgesetzen, Mindestlöhnen, Landreformen und Wohnrechten zu verbessern. Trotzdem gehören Farmbewohner immer noch zu den am stärksten benachteiligten und isolierten Bevölkerungsgruppen.

Mit einem qualitativen und quantitativen Forschungsansatz untersucht diese Studie die grundlegenden Ursachen für die Nahrungs- und Existenzsicherheit sowie die Bedeutung von sozialen Netzwerken. Zu diesem Zweck wurden zwischen 2004 und 2008 auf drei kommerziellen Farmen und einer informellen Siedlung in der Nord-West Provinz 69 Farmbewohner regelmäßig aufgesucht und Tiefen- und strukturiert-offene Interviews, Gruppendiskussionen und Beobachtungen vorgenommen. Diese Studie ist Teil eines größeren Forschungsprojektes, welches sich mit dem Zusammenhang zwischen Ernährungssicherheit, Lebensbedingungen und HIV/AIDS von Farmhaushalten befasst.

Die Farmbewohner befinden sich in einem Teufelskreis bestehend aus geringen finanziellen Mitteln, unzulänglichen Grundversorgungen, aus niedrigen Gesundheits- und Bildungsniveaus, geringen sozialen Ressourcen sowie aus der Abhängigkeit vom Farmbesitzer. Darüber hinaus wird die Nahrungs- und Existenzsicherheit durch Wohnunsicherheit, HIV/AIDS, Alkoholmissbrauch und gender-spezifische Konflikte sowie durch die Machtlosigkeit der Frauen gefährdet. Da eine Festanstellung meist Männern vorbehalten ist, sind die Frauen nicht nur bezüglich Einkommen sondern auch Unterkunft und weiteren Leistungen von ihren Partnern abhängig. Obwohl Frauen im Vergleich zu Männern mehr Einkommensquellen haben und über mehr Sozialkapital verfügen, gibt es ihnen nicht die Möglichkeit, dieser Abhängigkeit zu entkommen. Jeder zweite Haushalt (52.3%) gilt als nahrungsunsicher, wobei dies auf mehr partnerschaftliche Haushalte (62.5%) als von Frauen geführte Haushalte (33.3%) zutrifft. Netzwerke von Farmbewohnern zur sozialen Unterstützung bestehen im Durchschnitt aus zehn Personen, die meistens miteinander verwandt sind (64.4%) und in einem Radius von weniger als 50 Kilometern leben (89.0%). Die Bildung solcher Netzwerke wird durch Faktoren wie Geschlecht, Wohnsitz, Alter, Entfernung zum Geburtsort und Nahrungssicherheit der Haushalte beeinflusst und weniger durch die Dauer des Aufenthalts, durch Einkommen oder die Haushaltskategorie. Farmbesitzer spielen eine zentrale Rolle, besonders in Bezug auf materielle und finanzielle Unterstützungen, was das Vorhandensein paternalistischer Strukturen bestätigt. Da die Mehrheit der Netzwerkakteure einen niedrigen ökonomischen Status besitzt, kann das gesamte Netzwerk auch nur begrenzte Ressourcen aufweisen. Während diese sozialen Netzwerke helfen, finanzielle Unsicherheiten und Nahrungsmittelknappheit zu überstehen, kann die Verpflichtung zur Gegenseitigkeit die Farmbewohner langfristig zu Nahrungs- und Existenzunsicherheit führen. Neben der Kirche als soziale und

religiöse Institution gibt es nur wenige andere soziale Gruppen, was vor allem auf die eingeschränkte Infrastruktur und die mangelhafte Organisationsfähigkeit der Farmbewohner zurückzuführen ist. Die Farmbewohner haben nur geringe Beziehungen zu städtischen Gebieten und mit wohlhabenderen Haushalten, daher sind ihre Möglichkeiten sich zu informieren und ausreichende Ressourcen für einen besseren Lebensunterhalt zu mobilisieren eingeschränkt.

Diese umfassende Untersuchung deckt die Komplexität jener Faktoren auf, die sich auf die Nahrungs- und Existenzsicherheit von Farmbewohnern auswirken. Dabei wird besonders auf die paternalistischen Strukturen, die Geschlechterverhältnisse, das begrenzte Sozialkapital und die vorhandenen sozialen Netzwerke eingegangen. Es bedarf besonders partizipativer Strategien zur Kompetenzförderung und -stärkung, um sowohl Männern als auch Frauen die Möglichkeit zu geben, auf bereits bestehenden Ressourcen aufzubauen und sich ihren Herausforderungen aktiv zu stellen.

REFERENCES

ADATO M, CARTER MR, MAY J (2006): Exploring poverty traps and spcial exclusion in South Africa using qualitative and quantitative data. Journal of Development Studies 42(2):226-247.

ALTMAN M, HART TGB, JACOBS PT (2009): Household food security in South Africa. Agrekon 48(4):345-361.

AMOATENG AY, HEATON TB, KALULE-SABITI I (2007): Living arrangements in South Africa. In: AMOATENG AY, HEATON TB (eds.): Families and households in post-apartheid South Africa: Socio-demographic perspectives. Cape Town, South Africa: HSRC Press. p. 43-59.

http://www.hsrcpress.ac.za/product.php?productid=2206 (accessed May 2010)

ATKINSON D (2007): Going for broke. The fate of farm workers in arid South Africa. Cape Town: Human Science Research Council.

http://www.hsrcpress.ac.za/product.php?productid=2191 (accessed May 2010)

BABBIE E, MOUTON J (2001): The practice of social research. Cape Town: Oxford Southern Africa.

BACKHAUS K, ERICHSON B, PLINKE W, WEIBER R (2006): Multivariate Analysemethoden. Eine anwendungsorientierte Einführung. 11th edition. Berlin Heiderlberg: Springer.

BANK L (1994): Angry Men and Working Women. Gender, Violence and Economic Change in Qwaqwa in the 1980s. In: *African Studies*, 53 (1):89-114.

BASTANI S (2007): Family comes first: Men's and women's personal networks in Tehran. Social Networks 29:357-374.

BATEL C 2006: Place of residence and shopping facilities of South African farm workers, North West Province. BSc thesis. Giessen: Department of Home Economics and Nutrition Sciences of Justus-Liebig University. (unpublished)

BERG JH, KELLY EP (1990): Social relationships and the lack of social relationships. In Duck S, Silver RC (eds.): Personal relationships and social support. London: Sage. p. 140-158.

BHORAT H, KANBUR R (eds.) (2006): Poverty and policy in post-apartheid South Africa. Cape Town: HSRC Press.

BORGATTI SP (2002): A brief guide to using NetDraw. Harvard, MA: Analytic Technologies.

http://www.analytictech.com/Netdraw/netdraw.htm (accessed May 2010)

BORGATTI SP, EVERETT MG, FREEMAN LC (1999): Ucinet for Windows: Software for Social Network Analysis. Harvard, MA: Analytic Technologies.

BOURDIEU P, WACQUANT LJD (1992): An innovation to reflexive sociology. Chicago: University of Chicago Press.

BRADSHAW D, GROENEWALD P, LAUBSCHER R, NANNAN N, NOJILANA B, NORMAN R, PIETERSE D, SCHNEIDER M, BOURNE DE, TIMÆUS IM, DORRINGTON R, JOHNSON L (2003): Initial burden of disease estimates for South Africa, 2000. S AFR MED J 93: 682-688.

BRADSHAW D, NANNAN N (2004): Health status. In: South African Health Review 2003/04. Durban: Health Systems Trust. p. 45-58.

http://www.hst.org.za/publications/423 (accessed May 2010)

BURGER D (ed.) (2009): South Africa Yearbook 2008/09. Sixteenth edition. Pretoria, South Africa: Government Communication and Information System (GCIS).

http://www.gcis.gov.za/resource_centre/sa_info/yearbook/2008-09.htm (accessed May 2010)

BURT RS (1984): Network items and the general social survey. Social networks 6:239-339.

CAMPELL JC (2002): Health consequences of intimate partner violence. Lancet 359:1331–1336.

CARTER MR, MALUCCIO JA (2003): Social Capital and Coping with Economic Shocks: An analysis of stunting of South African Children. World Development 31(7):1147-1163.

CASHDAN EA (1985): Coping with risk: Reciprocity among the Barsarwa of Northern Botswana. Man, New Series 20(3):454-474.

CHAMBERS R (1988): Sustainable rural livelihoods: A key strategy for people, environment and development. In: Conroy C, Lituinoff M (eds.) (1988): The greening of aid: Sustainable livelihoods in practice. London: Earthscan. Quoted by: FRANKENBERGER TR, DRINKWATER M, MAXWELL D (2000): Operationalizing household livelihood security: A holistic approach for addressing poverty and vulnerability. Georgia, Atlanta: CARE.

CHAMBERS R, CONWAY G (1992): Sustainable rural livelihoods: Practical concepts for the 21st century. IDS Discussion Paper 296. Brighton: Institute of Development Studies.

CHOPRA M (2003): Risk factors for undernutrition of young children in a rural area of South Africa. Public Health Nutrition 6(7):645-652.

CHOPRA M, WHITTEN C, DRIMMIE S (2009): Combating malnutrition in South Africa. GAIN working paper series No.1. Global Alliance for Improved Nutrition.

http://www.gainhealth.org/reports/gain-working-paper-series-no-1-combating-malnutrition-south-africa (accessed May 2010)

CLAY E (2003): Food security: concepts and measurement. Paper for FAO Expert Consultation on Trade and Food Security: Conceptualising the Linkages. Rome, 11-12 July 2002. Published in: FAO (Food and Agricultural Organisation of the United Nations): Trade reforms and food security: Conceptualising the linkages. Rome: FAO. p. 25-34.

http://www.fao.org/docrep/005/y4671e/y4671e00.htm (accessed May 2010)

COLEMAN JS (1988): Social capital in the creation of human capital. American Journal of Sociology, Supplement: Organization and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure 94:95-120.

CRESWELL JW (2009): Research design. Qualitative, quantitative, and mixed methods approaches.3rd edition. Thousand Oaks, California: Sage.

CUTRONA CE, SUHR JA, MACFARLANE R (1990): Interpersonal transactions and the psychological sense of support. In Duck S, Silver RC (eds.): Personal relationships and social support. London: Sage. p. 30-45.

DAVIES W (1990): We cry for our land. Farm workers in South Africa. Oxford: Oxfam.

DAY C, GRAY A (2008): Health and related indicators. In: BARRON P, ROMA-REARDON J (eds.): South African Health Review 2008. Durban: Health Systems Trust. p.239-396.

http://www.hst.org.za/publications/841 (accessed May 2010)

DE VOS AS (2005): Qualitative data analysis and interpretation. In: DE VOS AS, STRYDOM H, FOUCHÉ CB, DELPORT CSL (eds.) (2005): Research at grass roots. For the social sciences and human service professions. 3rd edition. Pretoria: Van Schaik. p. 333-349.

DERSHEEM L, GZIRISHVILI D (1998): Informal social support networks and household vulnerability: Empirical findings from Georgia. World Development 26(10):1827-1838.

DEZIN NK, LINCOLN YS (2005): Introduction. The Discipline and practice of qualitative research. In: DEZIN NK, LINCOLN YS (eds.) (2005): The SAGE handbook of qualitative research. 3rd edition. Thousand Oaks, California: Sage. p. 1-32.

DFID (Department for International Development) (1999): Sustainable Livelihood Guidance Sheets. London: DFID.

http://www.eldis.org/go/topics/dossiers/livelihoods-connect/what-are-livelihoods-approaches/training-and-learning-materials (accessed May 2010).

DIAZ HL, DRUMM RD, RAMIREZ J, OIDJARV H (2002): Social capital, economic development and food security in Peru's mountain region. International Social Work 45:481-495.

DU TOIT A (1992): The farm as family. Paternalism, Management and Modernisation on Western Cape wine and fruit farms. Report on fildwork. Stellenbosh: Centre for Rural Legal Studies.

DU TOIT A (1993): The micro-politics of paternalism: The discourse of management and resistance on South African fruit and wine farms. Journal of Southern African Studies 19(2):314-336.

DU TOIT A (2004): ‚Social exclusion' discourse and chronic poverty: A South African case study. Development and change 35(5):987-1010.

DU TOIT A (2005): Forgotten by the Highway: Globalisation, adverse incorporation and chronic poverty in a commercial farm district. CSSR Working Paper No. 101. Cape Town: Centre for Social Science Research, UCT.

DU TOIT A, ALLY F (2003): The externalisation and casualisation of farm labour in Western Cape horticulture. A survey of patterns in the agricultural labour market in key Western Cape districts, and their implications for employment justice. Research report no. 16. Cape Town: Programme for Land and Agrarian Studies and Centre for Rural Legal Studies

http://www.plaas.org.za/pubs2/downloads/RR 16 du Toit and Ally Web.pdf (accessed May 2010)

DUNKLE K, JEWKES RK, BROWN HC, GRAY GE, MCINTYRE JA, HARLOW SD (2004b): Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinic in South Africa. The Lancet 363:1415-1421.

DUNKLE K, JEWKES RK, BROWN HC, YOSHIHAMA M, GRAY GE, MCINTYRE JA, HARLOW SD (2004a): Prevalence and Patterns of Gender-based Violence and Revictimization among Women Attending Antenatal Clinics in Soweto, South Africa. American Journal of Epidemiology 160(3):230-239.

ECKENRODE J, GORE S (1981): Stressful events and social supports: The significance of context. In: GOTTLIEB BH (ed.): Social networks and social support. Beverly Hills, California: Sage. p. 43-68.

EWERT J, HAMMAN J (1999): Why paternalism survives: Globalization, dempcratization and labour on South African wine farms. Sociologia Ruralis 39(2):202-221.

FANKENBER TR (1996): Measuring household livelihood security: An approach for reducing absolute poverty. Food Forum 24. Washington D.C.: Food Aids management.

FAO (Food and Agricultural Organisation of the United Nations) (1996): Rome Declaration on World Food Security and World Food Summit Plan of Action. World Food Summit 13-17 November 1996. Rome.

http://www.fao.org/WFS/index_en.htm (accessed May 2010)

FAO (Food and Agricultural Organisation of the United Nations) (2001): The state of food insecurity in the world 2001. Rome: FAO.

http://www.fao.org/docrep/003/Y1500E/Y1500E00.HTM (accessed May 2010)

FAO (Food and Agricultural Organisation of the United Nations) (2007b): HIV/AIDS, food security and rural livelihoods. Factsheet.

http://www.fao.org/worldfoodsummit/english/fsheets/aids.pdf (accessed May 2010)

FAO (Food and Agricultural Organisation of the United Nations) (2007a): The spectrum of malnutrition. Factsheet.

http://www.fao.org/worldfoodsummit/english/fsheets/malnutrition.pdf (accessed May 2010)

FAO (Food and Agricultural Organisation of the United Nations) (2005): The State of Food Insecurity in the World 2005. Eradicating world hunger – key to achieving the Millennium Development Goals. Rome: FAO.

ftp://ftp.fao.org/docrep/fao/008/a0200e/a0200e00.pdf (accessed May 2010)

FAO, EU (Food and Agricultural Organisation of the United Nations and European Union) (2008): Food security concepts and frameworks. Lesson 2. Concepts related to food security. Distance Learning Course. EC-FAO Food Security Information for Action Programme.

http://www.foodsec.org/DL/dlintro_en.asp (accessed May 2010)

FIELD A (2005): Discovering statistics using SPSS. 2nd edition. London: Sage.

FLICK U (2002): An introduction to qualitative research. 2nd edition. London: Sage.

FORD K, HOSEGOOD V (2005): AIDS mortality and the mobility of children in KwaZulu-Natal, South Africa. DEMOGRAPHY 42(4):757-768.

FOUCHÉ CB (2005): Qualitative research designs. In: DE VOS AS, STRYDOM H, FOUCHÉ CB, DELPORT CSL (eds.) (2005): Research at grass roots. For the social sciences and human service professions. 3rd edition. Pretoria: Van Schaik. p. 267-273.

FOUCHÉ CB, DELPORT CSL (2005): Introduction to the research process. In: DE VOS AS, STRYDOM H, FOUCHÉ CB, DELPORT CSL (eds.) (2005): Research at grass roots. For the social sciences and human service professions. 3rd edition. Pretoria: Van Schaik. p. 71-85.

FRANCIS E (2002a): Rural livelihoods institutions and vulnerability in the North West Province, South Africa. Journal of Southern African Studies 28(3):531-550.

FRANCIS E (2002b): Gender, migration and multiple livelihoods: Case studies from Eastern and Southern Africa. Journal of Southern African Studies 38(5):167-190.

FRANKENBERGER TR, DRINKWATER M, MAXWELL D (2000): Operationalizing household livelihood security: A holistic approach for addressing poverty and vulnerability. Georgia, Atlanta: CARE.

http://pqdl.care.org/Practice/HLS - Operationalizing HLS - A Holistic Approach.pdf (accessed May 2010)

Frankenberger, T. 1996 "Measuring Household Livelihood Security: An Approach for Reducing Absolute Poverty." Food Forum 24. Washington, D.C. Food Aid Management. Quoted by: FRANKENBERGER TR, DRINKWATER M, MAXWELL D (2000): Operationalizing household livelihood security: A holistic approach for addressing poverty and vulnerability. Georgia, Atlanta: CARE.

FRYE I (2008): Poverty, social security and civil society in South Africa. Triangulating transformation. Stuttgart, Germany: Brot für die Welt.

http://www.brot-fuer-die-welt.de/downloads/fachinformationen/analyse03_suedafrika.pdf (accessed May 2010)

GOLD RL (1969): Roles in sociological field observation. In: MCCALL GJ, SIMMONS JL (eds.): Issues in participant observation. Reading, MA: Addison-Wesley. p. 30-39. Quoted by: RUBIN A, BABBIE E (2005): Research methods for social work. 5th edition. Belmont, California: Thomson. Brooks/Cole.

GOLDBLATT B (2005): Gender and social assistance in the first decade of democracy: A case study of South Africa's child support grant. Politikon 32(2):239-257.

GRANOVETTER MS (1973): The strength of weak ties. American Journal of Sociology 78(6):1360-1380.

GREEFF M (2005): Information collection: Interviewing. In: DE VOS AS, STRYDOM H, FOUCHÉ CB, DELPORT CSL (eds.) (2005): Research at grass roots. For the social sciences and human service professions. 3rd edition. Pretoria: Van Schaik. p. 286-313.

GREENACRE MJ (2007): Interdisciplinary statistics. Correspondence analysis in practice. 2nd edition. Boca Raton, Florida: Chapman & Hall.

GROSS G, SCHOENEBERGER H, PFEIFER H, PREUSS HJA (2000): The four dimensions of food and nutrition Security: Definitions and Concepts. InWent and FAO.

http://www.fao.org/documents/show_cdr.asp?url_file=/docrep/008/a0200e/a0200e00.htm (accessed January 2006)

HADDAD L, MALUCCIO J (2002): Trust, membership in groups, and household welfare: Evidence from KwaZulu-Natal, South Africa. IFPRI (International Food Policy Institute). FCND Discussion Paper No. 135.

http://www.ifpri.org/divs/fcnd/dp/papers/fcndp135.pdf (accessed May 2010)

HADLEY C, MULDER MB, FITZHERBERT E (2007): Seasonal food insecurity and perceived social support in rural Tanzania. Public Heath Nutrition 10(6):544-551.

HALPERN D (2005): Social capital. Cambridge: Polity Press.

HANNEMAN RA, RIDDLE M (2005): Introduction to Social Network Methods. Online textbook. University of California, Riverside.

http://faculty.ucr.edu/~hanneman/ (accessed May 2010)

HEUMANN N (2006): Nutrition security of black South African farm worker households – A qualitative empirical study from a microsocial perspective. Diss-Dipl. Jena: Friedrich-Schiller-University. (unpublished)

HOLLSTEIN B (2006): Qualitative Methoden und Netzwerkanalyse – ein Widerspruch? In: HOLLSTEIN B, STRAUS F (eds.) (2006): Qualitative Netzwerkanalyse. Konzepte, Methoden, Anwendungen. Wiesbaden: VS Verlag für Sozialwissenschaften. p. 11-35.

HOLLSTEIN B, STRAUS F (eds.) (2006): Qualitative Netzwerkanalyse. Konzepte, Methoden, Anwendungen. Wiesbaden: VS Verlag für Sozialwissenschaften.

HOSEGOOD V, PRESTON-WHYTE E, BUSZA J, MOITSE S, TIMAEUS IM (2007): Revealing the full extent of household' experience of HIV and AIDS in rural South Africa. Social Science & Medicine 65(6):1249-1259.

HOSEGOOD V, TIMAEUS IM (2001): Household composition and dynamics in KwaZulu Natal, South Africa: Mirroring social reality in longitudinal data collection. Paper presented at The African Household Virtual Conference. An ACAP Production. November 21-24, 2001.

http://www.pop.upenn.edu/africahh/ (accessed May 2010)

HUSY D, SAMSON C (2001): Promoting development and land reform on South African farms. Paper presented at the SARPN on Land Reform and Poverty Alleviation in Southern Africa, Pretoria, 4-5 June 2001.

ICRW, HSRC, AfD (International Centre for Research on Women, Human Science Research Council, Associates for Development) (2008): Women's property rights, HIV and AIDS, and domestic violence: research findings from two districts in South Africa and Uganda. Cape Town: HSRC Press.

http://www.hsrcpress.ac.za/product.php?productid=2232 (accessed May 2010)

IFPRI (International Food Policy Research Institute) (2005): Women. Still the key to food and nutrition security. Washington, DC: IFPRI.

IOM (International Organization for Migration), HTT (Hoedspruit Training Trust) (2008): Survey highlights the HIV prevalence and vulnerability of farm workers.

http://www.iom.org.za/site/dmdocuments/hoedspruit%20survey%204.pdf (accessed May 2010)

JANSEN D (2006): Einführung in die Netzwerkanalyse. Grundlagen, Methoden, Forschungsbeispiele. 3rd edition. Wiesbaden: VS Verlag für Sozialwissenschaften.

JEEVES AH, CRUSH J (eds.) (1997): White farms, black labour. The State and Agrarian Change in Southern Africa, 1910-1950. In: Introduction. Pietermaritzburg, South Africa: University of Natal Press.

JEWKES R, PENN-KEKANA, LEVIN J, RATSAKA M, SCHRIEBER M (1999): "He must give me money, he mustn't beat me" Violence against women in three South African Provinces. Pretoria: Medical Research Council.

http://www.mrc.ac.za/gender/violence.pdf (accessed May 2010)

JONES S (1999): Singlehood for security: towards a review of the relative economic status of women and children in woman-led households. Society in Transition 30(1):13-27.

KEEGAN TJ (1986): Rural transformation in industrialising South Africa: the southern highveld. Cape Town: Ravan.

KIM J, MOTSEI M (2002): "Women enjoy punishment": attitudes and experiences of gender-based violence among PHC nurses in rural South Africa. Social Science & Medicine 54:1243-1254.

KISTNER U (2003): Gender-based violence and HIV/AIDS in South Africa. A literature review. Johannesburg: Centre for AIDS Development, Research and Evaluation /South African Department of Health.

http://www.cadre.org.za/files/Womens_lit_review.pdf (accessed May 2010)

KLINGEMANN H (2001): Alcohol and its social consequences – the forgotten dimension. Copenhagen: World Health Organization, Regional Office for Europe.

KLOVDAHL AS (1994): Social network analysis. In: HUSEN T & POSTLETHWEITE TN (eds.) (1994): International Encyclopaedia of Education, 2nd edition. London: Pergamon. p. 5554-5560.

KOK P, COLLINSON M (2006): Migration and urbanisation in South Africa. Report 03-04-02, Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/Report-03-04-02/Report-03-04-02.pdf (accessed May 2010)

KRACHT U (1999): Hunger, malnutrition and poverty: Trends and prospects towards the 21st Century. In: KRACHT U, SCHULZ M (eds.) (1999): Food security and nutrition. The global challenge. New York: St. Martin's Press. p. 55-74.

KRACHT U, SCHULZ M (eds.) (1999): Food security and nutrition. The global challenge. New York: St. Martin's Press.

KRITZINGER A, VORSTER J (1998): Women on South African Farms: Empowerment across or along race and class divisions? Sociologia Ruralis 38(3):331-350.

KRUGER A, LEMKE S, PHOMETSI M, VAN'T RIET H, PIENAAR AE, KOTZE G (2006): Poverty and household food security of black South African farm workers. The legacy of social inequalities. Public Health Nutrition 9:830-836.

KUZWAYO P (2008): Food and nutrition security. In STEYN NP, TEMPLE N (eds.): Community nutrition textbook for South Africa: A rights-based approach. Rome/Tygerberg, SA: FAO and MRC. p. 161-198.

LABADARIOS D (ed.) (2000): The National Food Consumption Survey (NFCS). Children Aged 1-9 years, South Africa, 1999. Technical Report. Stellenbosch: Department of Health.

http://www.sahealthinfo.org/nutrition/foodconsumption.htm (accessed: May 2010)

LABADARIOS D, Nel JH (2000): Anthropometric Status. In: LABADARIOS D (ed.): The National Food Consumption Survey (NFCS): Children aged 1-9 years, South Africa, 1999. Technical Report. Stellenbosch: Department of Health. p. 161-187.

http://www.sahealthinfo.org/nutrition/foodconsumption.htm (accessed May 2010)

LABADARIOS D, SWART R, MAUNDER EMW, KRUGER HS, GERICKE GJ, KUZWAYO PMN, NTSIE PR, STEYN NP, SCHLOSS I, DHANSAY MA, JOOSTE PL, DANNHAUSER A , NEL JH, MOLEFE D, KOTZE TJVW (2008): Executive summary of the National Food Consumption Survey Fortification Baseline (NFCS-FB-I). South Africa, 2005. S Afr J Clin Nutr 21(3)(Suppl 2):245-300.

http://www.sajcn.com/index.php/SAJCN/article/view/286/281 (accessed May 2010)

LAHIFF E (2007): Redistributive land reform and poverty reduction in South Africa. A working paper for the research project on 'Livelihoods after land reform'. Programme for Land and Agrarian Studies. University of the Western Cape.

http://www.lalr.org.za/south-africa/redistributive-land-reform-and-poverty-reduction-in-south-africa/view (accessed May 2010)

LAHIFF E (2008): Land reform in South Africa: A status report 2008. Programme for Land and Agrarian Studies. University of the Western Cape.

http://www.plaas.org.za/pubs/rr/PLAAS_RR38_Lahiff.pdf (accessed May 2010)

LECLERC-MADLALA S (2006): 'We will eat when I get the grant': negotiating AIDS, poverty and antiretroviral treatment in South Africa. African Journal of AIDS Research 5(3):249-256.

LEMKE S (2001): Food and nutrition security in black South African households. Creative ways of coping and survival. Diss-PhD. Weihenstephan: Technical University of Munich.
http://tumb1.biblio.tu-muenchen.de/publ/diss/ww/2001/lemke.pdf (accessed: May 2010)

LEMKE S (2005): Nutrition Security, Livelihoods and HIV/AIDS. Implications for Research among Farm Worker Households in South Africa. Public Health Nutrition 8(7):844-852.

Lemke S (2010): Food security and right to adequate food in the context of land and agrarian reform in South Africa. Brochure, p. 17, Centre for Agriculture in the Tropics and Subtropics.

http://www.troz.de (accessed May 2010)

LEMKE S, BELLOWS AN, HEUMANN N (2009): Gender and sustainable livelihoods. A case study of South African farm workers. International Journal of Innovation and Sustainable Development 4(2/3):195-205.

LEMKE S, JANSEN VAN RENSBURG NS (2005): Frontiersmen: White South African farmers in the North West Province, South Africa. A Case Study. Paper presented at the Conference of Anthropology Southern Africa, University of Kwa-Zulu Natal, Durban, 22-24 September 2005.

LEMKE S, VORSTER HH, JANSEN VAN RENSBURG NS, ZICHE J (2003): Empowered women, social networks and the contribution of the qualitative research: broadening our understanding of underlying causes for food and nutrition insecurity. Public Health Nutrition 6(8):759-764.

LINCOLN YS, GUBA EA (1985): Naturalistic inquiry. Beverly Hills, California: Sage.

LONDON L (2003): Human rights, environmental justice, and the health of farm workers in South Africa. International Journal of Occupational and Environmental Health 9:59-68.

LONDON L, SANDERS D, NAUDE JW (1998): Farm workers in South Africa. The challenge of eradicating alcohol abuse and the legacy of the 'DOP' system. South African Medical Journal 88(9):1092-1094.

MACLURE M, WILLETT WC (1987): Misinterpretation and misuse of the kappa statitsic. American Journal of Epidemiology 126; 2:161-169.

MAIL & GUARDIAN (2009a): SA's election campaign all about Zuma, Cope. Mail & Guardian online 21.04.2009.

http://www.mg.co.za/article/2009-04-21-sas-election-campaign-all-about-zuma-cope (accessed May 2010)

MAIL & GUARDIAN (2009b): The power of the poor. Mail & Guardian online 25.04.2009.

http://www.mg.co.za/article/2009-04-25-the-power-of-poor (accessed May 2010)

MAIL & GUARDIAN (2009c): Election results show ANC an early lead. Mail & Guardian online 23.04.2009.

http://www.mg.co.za/article/2009-04-23-election-results-show-anc-in-early-lead (accessed May 2010)

MALUCCIO J, HADDAD L, MAY J (1999): Social Capital and Income Generation in South Africa, 1993-98. Preliminary Version. The World Bank.

http://www.ifpri.org/publication/social-capital-and-income-generation-south-africa-1993-98 (accessed May 2010)

MARGETTS B (2003): Editoral. Public Health Nutrition 6(8):727-28.

MARIN A (2004): Are respondents more likely to list alters with certain characteristics? Implications for name generator data. Social Networks 26:289-307.

MARTIN KS, ROGERS BL, COOK TJ, JOSEPH HM (2004): Social capital is associated with decreases risk of hunger. Social Science & Medicine 58:2645-2654.

MATENGE ST (2007): Social networks and fluidity of farm worker households in the context of nutrition security. A case study of a South African farm in the North West Province. Diss-MSc. Potchefstroom: North-West University. (unpublished)

MATJILA MJ, HOOSEN A, STOLTZ A, CAMERON N (2008): STIs, HIV and AIDS and TB: Progress and challenges. In: BARRON P, ROMA-REARDON J (eds.): South African Health Review 2008. Durban: Health Systems Trust. p. 89-102.

http://www.hst.org.za/publications/841 (accessed May 2010)

MAUNDER E, LABADARIOS D (2000): The food procurement and household food inventory method. In: LABADARIOS D (ed.): The National Food Consumption Survey (NFCS): Children aged 1-9 years, South Africa, 1999. Technical Report. Stellenbosch: Department of Health. p. 490-521.

http://www.sahealthinfo.org/nutrition/foodconsumption.htm (accessed May 2010)

MAXWELL S, SMITH M 1992: Household food security: A conceptual review. In: MAXWELL S, FRANKENBERGER TR (eds.) (1992): Household food security: Concepts, indicators, measurements. A technical Review., New York and Rome: UNICEF and IFAD. p. 1-72.

MAY J (ed.) (2000): Poverty and inequality in South Africa. Meeting the challenge. Cape Town: David Philip Publishers.

MAY J, CARTER M, POSEL D (1995): The composition and persistence of poverty in rural South Africa. An entitlements approach. Policy Paper 15. Johannesburg: Land and Agriculture Policy Centre. Quoted by: MAY J, WOOLARD I, KLASEN S (2000): The nature of measurement of poverty and inequality. In: MAY J (ed.): Poverty and inequality in South Africa. Meeting the Challenge. Cape Town: Davis Philip. p. 19-48.

MAY J, ROGERSON C, VAUGHAN A (2000): Livelihoods and assets. In: MAY J (ed.): Poverty and inequality in South Africa. Meeting the Challenge. Cape Town: Davis Philip. p. 229-258.

MHLANGA RE (2008): Maternal, newborn and child Health: 30 Years On. In: BARRON P, ROMA-REARDON J (eds.): South African Health Review 2008. Durban: Health Systems Trust. p. 115-128.

http://www.hst.org.za/publications/841 (accessed May 2010)

MITCHELL JC (1969): The concept and news of social networks. In: MITCHELL JC (ed.) (1969): Social networks in urban situations. Analysis of personal relationships in Central African towns. Manchester: Manchester University Press. p. 1-50.

MONETTE DR, SULLIVAN TJ, DEJONG CR (2005): Applied social research. A tool for the human services. 6th edition. Toronto: Thomson. Brooks/Cole.

MORGAN DL (1990): Combining the strength of social networks, social support, and personal relationships. In Duck S, Silver RC (eds.): Personal relationships and social support. London: Sage. p. 190-215.

MORGAN DL (1997): Focus groups as qualitative research. 2nd ed. Thousand Oaks: Sage. Quoted by: GREEFF M (2005): Information collection: Interviewing. In: DE VOS AS, STRYDOM H, FOUCHÉ CB, DELPORT CSL (eds.) (2005): Research at grass roots. For the social sciences and human service professions. 3rd edition. Pretoria: Van Schaik. p. 286-313.

MOSELEY WG (2006): Farm workers, agricultural transformation, and land reform in Western Cape Province, South Africa. FOCUS on Geography 49(1):1-7.

MOSER C (1999): Violence and poverty in South Africa: Their impact on household relations and social capital. Informal Discussion Paper Series. South Africa: Poverty and inequality. Washington, DC: The World Bank.

MOUSTAKAS C (1994): Phenomenological research methods. Thousand Oaks, California: Sage. Quoted by: CRESWELL JW (2009): Research design. Qualitative, quantitative, and mixed methods approaches.3rd edition. Thousand Oaks, California: Sage.

MURRAY C (1980): Migrant labour and changing family structure in the rural periphery of Southern Africa. Journal of Southern African Studies 6(2):139-159.

NAIDOO K (2000): Households, gender relations and changing livelihoods in Winterveld. Working Paper Series: Multiple Livelihoods and Social Change. Manchester: Institute for Development Policy and Management.

NARAYAN D (1997): Voices of the poor. Poverty and social capital in Tanzania. ESSD Studies and Monograph Series, Vol. 20. Washington, DC: The World Bank.

NARAYAN D (1999): Bonds and bridges: Social capital and poverty. Policy Research Working Paper 2167. Washington D.C.: World Bank.

NATRASS N (2007): Disability and welfare in South Africa's era of unemployment and AIDS. In: BUHLUNGU S, DANIEL J, SOTHALL R, LUTCHMAN J (eds.): State of the nation. South Africa 2007. Cape Town: HSRC Press. p. 179-200.

http://www.hsrcpress.ac.za/product.php?productid=2183 (accessed May 2010)

NIEHAUS I, JONSSON G (2005): Dr. Wouter Basson, Americans, and wild beasts: Men's conspiracy theories of HIV/AIDS in the South African Lowveld. Medical Anthropology 24:179-208.

OUTWATER A, ABRAHAMS N, CAMPELL JC (2005): Women in South Africa. Intentional violence and HIV/AIDS: Intersections and preventions. Journal of Black Studies 35(4):135-154.

PARIKH KS (2000): World Food System. Resilient for the Rich, Stubborn for the Starving. SCN News/United Nations, Administrative Committee on Coordination, Sub-Committee on Nutrition 20:17-20.

PARKS MR (2007): Personal relationships and personal networks. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.

PHASWANA N, PELTZER K, PETROS G (2009): Disability grant for people living with HIV/AIDS in the Eastern Cape of South Africa. Social Work in Health Care 48(5):533-550.

POSEL D, KAHN K, WALKER L (2007): Living with death in a time of AIDS: A rural South African case study. Scandinavian Journal of Public Health 35(Suppl 69):138-146.

PUOANE T, TSOLEKILE L, SANDERS D, PARKER W (2008): Chronic non-communicable diseases. In: BARRON P, ROMA-REARDON J (eds.): South African Health Review 2008. Durban: Health Systems Trust. p. 73-88.

http://www.hst.org.za/publications/841 (accessed May 2010)

PUTNAM RD (1993): Making democracy work: Civic traditions in modern Italy. Princeton, New Jersey: Princeton University Press.

QUISUMBING AR, BROWN LR, FELDSTEIN HS, HADDAD L, PENA C (1995): Women: The key to food security. Food Policy Report. Washington, D.C.: International Food Policy Research Institute.

RENDALL-MKOSI K, LONDON L, ADNAMS A, MOROJELE N, MCLOUGHLIN JA, GOLDSTONE C (2008): Fetal alcohol Spectrum Disorder in South Africa: Situational and gap analysis. Pretoria: University of Pretoria and UNICEF South Africa.

http://www.unicef.org/southafrica/SAF_resources_fas.pdf (accessed May 2010)

RICHTER M, HARDY C (2006): Disability grants or antirtrovirals? A quandary for people with HIV/AIDS in South Africa. African Journal of AIDS Research 5(1):85-96.

ROSS FC (1996): Diffusing Domesticity: Domestic fluidity in Die Bos. Social Dynamics 22(1):55-71.

RUBIN A, BABBIE E (2005): Research methods for social work. 5th edition. Belmont, California: Thomson. Brooks/Cole.

RUBIN HJ, RUBIN IS (1995): Qualitative interviewing. The art of hearing data. Thousand Oaks, California: Sage.

RULE S, AIRD R, DRIMIE S, FABER M, GERMISHUYSE T, JORDAAN A, KOK P, ROBERTS B, ROEFS M, SCHONFELDT H, SCHWABE C, VAN LIESHOUT M, VAN ZYL J, VERMEULEN H (2005): Report on survey in Sekhukhune to pilot the development of a food insecurity and vulnerability modelling system (FIVIMS) for South Africa. HSRC Client Report.

http://fanrpan.net/documents/d00179/Sekhukhune_FIVIMS_Mar2005.pdf (accessed May 2010)

RUSSELL M (2003): Understanding black households: The problem. Social Dynamics 29(2):5-47.

SA DLA (South African Department of Land Affairs) (2007): Annual Report 1 April 2006-31 March 2007. Pretoria: Department of Land Affairs. Quoted by: LAHIFF E (2008): Land reform in South Africa: A status report 2008. Programme for Land and Agrarian Studies. University of the Western Cape.

http://www.plaas.org.za/pubs/rr/PLAAS_RR38_Lahiff.pdf (accessed May 2010)

SA DOA 2009 (South African Department of Agriculture) (2009): Abstract of Agricultural Statistics 2009. Pretoria: Department of Agriculture.

http://www.nda.agric.za/docs/Abstract_2009.pdf (accessed May 2010)

SA DOH (South African Department of Health) (1999): South Africa Demographic and Health Survey - 1998. Pretoria: Department of Health.

http://www.doh.gov.za/facts/1998/sadhs98/ (accessed May 2010)

SA DoH (South African Department of Health) (2009): 2008 National Antenatal Sentinel HIV and Syphilis Prevalence Survey, South Africa. Pretoria: Department of Health.

http://www.info.gov.za/view/DownloadFileAction?id=109007 (accessed May 2010)

SA DoH (South African Department of Health) (2010): The Integrated Nutrition Programme.

http://www.doh.gov.za/programmes/index.html (accessed May 2010)

SA DoH (South African Department of Health), MEDICAL RESEARCH COUNCIL, ORCMACRO (2007): South Africa Demographic and Health Survey 2003. Pretoria: Department of Health.

http://www.mrc.ac.za/bod/sadhs.htm (accessed May 2010)

SA DoL (South African Department of Labour) (2001): Determination of employment conditions in South African agriculture. Pretoria: South African Department of Labour.

ftp://ftp.hst.org.za/pubs/other/farmworkers.pdf (accessed May 2010)

SA DOL (South African Department of Labour) (2003a): Determination of employment conditions in South African agriculture. Executive summary. Pretoria: Department of Labour.

SA DOL (South African Department of Labour) (2003b): Determination of employment conditions in South African agriculture. Pretoria: Department of Labour.

SA DOL (South African Department of Labour) (2003c): Basic conditions of employment. Sectoral Determination 8: Farm Workers. Pretoria: Department of Labour.

SA DOL (South African Department of Labour) (2006): Basic conditions of employment act no. 75 of 1997. Sectoral determination 13: Farm worker sector, South Africa. Pretoria: Department of Labour.

http://www.labour.gov.za/legislation/sectoral-determinations/sectoral-determination-13-farm-worker-sector (accessed May 2010)

SA DoSD (Department of Social Development) (2002): Committee Report No. 5: Social Protection: Employment and Unemployment. Pretoria: SA DoSD.

www.sarpn.org.za/CountryPovertyPapers/SouthAfrica/taylor/report5.php (accessed May 2010)

SA DTI (South African Department of Trade and Industry) (2003): South Africa's economic transformation. A strategy for Broad Based Black Economic Empowerment.

http://www.dti.gov.za/bee/bee.htm (accessed May 2010)

SAHCR (South African Human Rights Commission) (2003): Final report on the inquiry into human rights violations in farming communities. SAHRC.

http://www.info.gov.za/otherdocs/2003/farming/ (accessed May 2010)

SAHRC (South African Human Rights Commission) (2003): Final report on the inquiry into human rights violations in farming communities. Johannesburg: South African Human Rights Commission.

SAVE THE CHILDREN, OXFAM (2002): HIV/AIDS and food security in Southern Africa. Save the children UK and Oxfam International.

http://www.oxfam.org.uk/resources/policy/hivaids/downloads/hiv_food_insecurity.pdf (accessed May 2010)

SCHENKER M (1998): The Health of Farm Workers – so much different, so much the same. South African Medical Journal 88(9):1091-1092.

SCHNEGG M, LANG H (2002): Methoden der Ethnographie. Heft I. Netzwerkanalyse - Eine praxisorientierte Einführung.

http://www.methoden-der-ethnographie.de/heft1/Netzwerkanalyse.pdf (accessed May 2010)

SCHWEIZER T (1996): Muster sozialer Ordnung. Netzwerkanalyse als Fundament der Sozialethnologie. Berlin: Reimer

SCHWEIZER T, SCHNEGG M, BERZBORN S (1998): Personal networks and social support in a multiethnic community of southern California. Social Networks 20:1-21.

SCOTT J (2000): Social network Analysis. A handbook. 2nd edition. Newbury Park: Sage.

SEIDEL G, NTULI N (1996): HIV, confidentiality, gender, and support in rural South Africa. The Lancet 347:469.

SEILING SB (2006): Social support among rural low-income mothers: Evidence from the Rural Families Speak Project.

http://fsos.che.umn.edu/img/assets/16501/April_SocialSupport_ResearchBrief.pdf (accessed June 2009)

SHABODIEN F (2006): Livelihoods struggles of women farm workers in South Africa. Stellenbosh: Women on Farms Project.

http://www.wfp.org.za/pdf/livelihood_struggles_of_sa_women_farm_workers,_2006.pdf (accessed May 2010)

SHARP J, SPIEGEL AD (1985): Vulnerability to impoverishment in South African rural areas: The erosion of kinship and neighbourhood as social resources. Journal of the International African Institute 55(2):133-152.

SIMBAYI LC, KALICHMAN S, STREBEL A, CLOETE A, HENDA N, MQEKETO (2007): Internalised stigma, discrimination, and depression among men and women living with HIV/AIDS in Cape Town, South Africa. Social Science & Medicine 64:1823-1831.

SITHOLE ST (2005): Nutrition security of farm workers in the North West Province, South Africa. Diss-MSc. Potchefstroom: North-West University. (unpublished)

SLATER R (2002): Differentiation and Diversification: Changing livelihoods n Quaqua, South Africa, 1970-2000. Journal of Southern African Studies 28(3):599-614.

SMITH LC, HADDAD L (2000): Explaining child malnutrition in developing countries. A cross-country analysis. Washington D.C.: International Food Policy Research Institute.

http://www.ifpri.org/pubs/abstract/111/rr111.pdf (accessed May 2010)

SMITH LC, RAMAKRISHNAN U, NDIAYE A, HADDAD L, MARTORELL R (2003): The importance of women's status for child nutrition in developing countries. Research Report 131. Washington, D.C.: International Food Policy Research Institute and Department of International Health, Emory University.

SMITH M, POINTING J, MAXWELL S (1992): Household food security: Concepts and definitions – An annotated bibliography. In: MAXWELL S, FRANKENBERGER TR (eds.) 1992: Household food security: Concepts, indicators, measurements. A technical Review. New York and Rome: UNICEF and IFAD. p. 135-192.

SOUTH AFRICA.INFO (2010): About South Africa. Geography and climate.

http://www.southafrica.info/about/geography/geography.htm (accessed May 2010)

SOUTH AFRICAN SOCIAL SECURITY AGENCY (2010): Qualifying requirements for social grants.

http://www.sassa.gov.za/content.asp?id=1000000511 (accessed May 2010)

SPIEGEL A (2005): Challenging the racism epithet whilst striving for demographic parity in apartheid's aftermath: What is racism? Paper presented at the Annual Conference of Anthropology Southern Africa, University of Natal, Durban, South Africa.

SPIEGEL AD, WATSON V, WILKINSON P (1996): Domestic diversity and fluidity among some African households in Greater Cape Town. Social Dynamics 22(1):7-30.

STATS SA (2004): Provincial Profile North West. Report No. 00-91-06. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/Report-00-91-06/Report-00-91-062004.pdf (accessed May 2010)

STATS SA (2005): Mid-year population estimates, South Africa 2005. Statistical Release P0302. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/P0302/P03022005.pdf (accessed May 2010)

STATS SA (2006): Census of Agriculture Provincial Statistics 2002 - North West. Financial and production statistics. Report No. 11-02-07 (2002). Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/Report-11-02-07/Report-11-02-072002.pdf (accessed May 2010)

STATS SA (2007): Community survey 2007 (Revised version). Statistical Release P0301. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/P0301/P0301.pdf (accessed May 2010)

STATS SA (2008a): Income and expenditure of households 2005/2006: Analysis of results. Report No. 01-00-01. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/Report-01-00-01/Report-01-00-012005.pdf (accessed May 2010)

STATS SA (2008b): General household survey 2008. Statistical Release P0318. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/P0318/P0318July2008.pdf (accessed May 2010)

STATS SA (2009a): Mid-year population estimates. Statistical Release P0302. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/P0302/P03022009.pdf (accessed May 2010)

STATS SA (2009b): Quarterly Labour Force Survey. Quarter 3, 2009. Statistical Release P0211. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/P0211/P02113rdQuarter2009.pdf (accessed May 2010)

STATS SA (2009c): Gross domestic product. Annual estimates 1993-2008, Regional estimates 2000-2008, Third quarter: 2009. Statistical Release P0441. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/P0441/P04413rdQuarter2009.pdf (accessed May 2010)

STATS SA (2009d): Census of Commercial Agriculture 2007 (Preliminary). Statistical release P1102. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/P1102/P11022007.pdf (accessed May 2010)

STATS SA (2009e): Labour Force Survey. Historical Revision September Series 2000 to 2007. Statistical Release P0210. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/P0210/P0210September2000,2001,2002,2003,2004,2005,2006,2007.pdf (accessed May 2010)

STATS SA (2009f): Community Survey 2007: Basic results – North West. Report No. 03-01-28. Pretoria: Statistics South Africa.

http://www.statssa.gov.za/publications/Report-03-01-28/Report-03-01-282007.pdf (accessed May 2010)

STEYN NP, Bradshaw D, Norman R, Joubert JD, Schneider M, Stein K (2006): Dietary changes and the health transition in South Africa: implications for health policy. In: FAO (Food and Agricultural Organisation of the United Nations): The double burden of malnutrition. Case studies from six developing countries. FAO Food and Nutrition Paper 84. Rome: FAO. p. 259-303.

STRYDOM H, DELPORT CSL (2005): Sampling and pilot study in qualitative research. In: DE VOS AS, STRYDOM H, FOUCHÉ CB, DELPORT CSL (eds.) (2005): Research at grass roots. For the social sciences and human service professions. 3rd edition. Pretoria: Van Schaik. p. 327-332.

SWART R, SANDERS D, MCLACHLAN M (2008): Nutrition: A primary health care perspective. In: BARRON P, ROMA-REARDON J (eds.): South African Health Review 2008. Durban: Health Systems Trust. p. 129-148.

http://www.hst.org.za/publications/841 (accessed May 2010)

TERREBLANCHE S (2002): A history of inequality in South Africa, 1652-2002. Pietermaritzburg: University of Natal Press.

THE PRESIDENCY (2009): Development indicators 2009. The Presidency, Republic of South Africa.

http://www.thepresidency.gov.za/learning/me/indicators/2009/indicators.pdf (accessed May 2010)

THOMAS RM (2003): Blending qualitative and quantitative research methods in theses and dissertations. Thousand Oaks, California: Corwin Press.

THOMPSON L (2001): A history of South Africa. 3rd edition. Yale University Press.

TORKELSSON A (2007): Resources, not capital: A case study of the gendered distribution and productivity of social network ties in rural Ethiopia. Rural Sociology 72(4):583-607.

TORRES L, BHORAT H, LEIBBRANDT M, CASSIM F (2000): Poverty and the labour market. In: MAY J (ed.): Poverty and inequality in South Africa. Meeting the Challenge. Cape Town: Davis Philip. p. 73-94.

UNAIDS (Joint United Nations Programme on HIV/AIDS) (2008): Report on the global AIDS epidemic.

http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008_Global_report.asp (accessed May 2010)

UNAIDS (Joint United Nations Programme on HIV/AIDS), WHO (World Health Organization) (2009): 09 AIDS epidemic update. Geneva, Switzerland: UNAIDS.

http://data.unaids.org/pub/Report/2009/JC1700_Epi_Update_2009_en.pdf (accessed May 2010)

UNAIDS, WHO (2008): Epidemiological Fact Sheet on HIV and AIDS. Core data on epidemiology and response. South Africa. 2008 Update.

http://apps.who.int/globalatlas/predefinedReports/EFS2008/full/EFS2008_ZA.pdf (accessed May 2010)

UNDP (United Nations Development Programme) (2003): South Africa. Human Development Report 2003. The challenge of sustainable development in South Africa: Unlocking people's creativity. Oxford University Press.

http://hdr.undp.org/en/reports/nationalreports/africa/southafrica/south_africa_2003_en.pdf (accessed May 2010)

UNDP (United Nations Development Programme) (2009): Human Development Report 2009, South Africa.

http://hdrstats.undp.org/en/countries/data_sheets/cty_ds_ZAF.html (accessed May 2010)

UNICEF (United Nations Children's Fund) (1990): Strategy for improved nutrition of children and women in developing countries. A UNICEF policy review. New York: UNICEF.

http://www.ceecis.org/iodine/01_global/01_pl/01_01_other_1992_unicef.pdf (accessed May 2010)

UNICEF (United Nations Children's Fund) (1998): The state of the world's children. Focus on Nutrition. New York: Oxford University Press for UNICEF.

http://www.unicef.org/sowc98/ (accessed May 2010)

UNITED NATIONS (1975): Report of the world food conference. Rome 5-16 November 1974. New York: United Nations.

www.eclac.org/cumbres/3/43/FAORLC-41001WorldFoodConference.doc (accessed May 2009)

UNSCN (United Nations Standing Committee on Nutrition) (2004): 5th Report on the world nutrition situation. Nutrition for improved development outcomes. Geneva: UNSCN.

UPHOFF N (1999): Understanding Social Capital: Learning from the analysis and experiences of participation. In DASGUPTA P, SEREGELDIN I (eds.): Social capital: A multifaceted perspective. Washington D.C.: World Bank. p. 215-249.

URDANG S (2006): The care economy: Gender and the silent AIDS crisis in Southern Africa. Journal of Southern African Studies 32(1):165-177.

VAN DER VLIET V (1991): Traditional Husbands, Modern Wives? Constructing Marriages in a South African Township. In: SPIEGEL AD, MCALLISTER PA (eds). Tradition and Transition in Southern Africa. Johannesburg: Witwatersrand University Press. p. 219-241.

VAN DER WAAL CS (1996): Rural children and residential instability in the Northern Province of South Africa. Social Dynamics 22(1):31-54.

VAN DONGEN E (2003): "Die lewe vat eck net soos ek dit kry." Lifestories and remembrance of older Coloured people on farms in the Western Cape Province. Journal of Cross-Cultural Gerontology 18:303-335.

VAN ROOYEN C (2006). New oppression, new identity: Flowers and female farm workers in the North West. In Alexander P, Dawson MC, Ichharam M (eds), *Globalisation and new identities: A view from the middle*. Johannesburg: Jacana Publishers. p. 87-110.

VETTEN L (2007): Violence against women in South Africa. In: BUHLUNGU S, DANIEL J, SOTHALL R, LUTCHMAN J (eds.): State of the nation. South Africa 2007. Cape Town: HSRC Press. p. 425-447.

http://www.hsrcpress.ac.za/product.php?productid=2183 (accessed May 2010)

VON SCHWEITZER R (1991). Einführung in die Wirtschaftslehre des privaten Haushalts. Stuttgart: Eugen Ulmer.

VORSTER E, BOURNE L (2008): The nutrition transition in South Africa. In: Steyn NP, Temple N (eds.): Community nutrition textbook for South Africa: A rights-based approach. Tygerberg, South Africa: Chronic Disease of Lifestyle Unit, South African Medical Research Council. p. 233-250.

VORSTER HH, WISSING MP, VENTER CS, KRUGER HS, KRUGER A, MALAN NT, RIDDER DE JH, VEIDMAN FJ, STEYN HS, MARGETTS BM, MACINTYRE U (2000): The impact of urbanisation on physical physiological and mental health of Africans in the North West Province of South Africa: the THUSA study. South African Journal of Sciences 96:505-514.

WALDMAN L (1994): Here you will remain: Gender, violence and movement on farms in the Western Cape. Stellenbosch: Centre for Rural Legal Studies.

WALDMAN L (1996): Monkey in a spiderweb: Farmer control and paternalism in the Western Cape. African Studies 55(1):63-86.

WALDMAN L, NTSEDI M (1997): Women on Highfield farms. An outlook for development. Claremont, South Africa: David Philip Publishers.

WASSERMAN S, FAUST K (1994): Social network analysis. Methods and Applications. New York: Cambridge University Press.

WEGERIF M, RUSSELL B, GRUNDLING I (2005): Still searching for security. The reality of farm dwellers evictions in South Africa. Polokwane North: Nkuzi Development Association; and Johannesburg: Social Surveys.

WEISER SD, LEITER K, BANGSBERG DR, BUTLER LM, PERCY-DE KORTE F, HLANZE Z, PHALADZE N, IACOPINO V, HEISLER M (2007): Food insufficiency is associated with high-risk sexual behavior among women in Botswana and Swaziland. PLOS Medicine 4(10):1589-1598.

WELLMAN B (1981): Applying network analysis to the study of support. In: GOTTLIEB BH (ed.): Social networks and social support. Beverly Hills, California: Sage. p. 171-200.

WELLMAN B, WORTLEY S (1990): Different strokes from different folks: Community ties and social support. American Journal of Sociology 96:558-588.

WHO (World Health Organization), UNICEF (United Nations Children's Fund) (2000): Global water supply and sanitation assessment. 2000 Report.

http://www.who.int/water_sanitation_health/monitoring/globalassess/en/ (accessed May 2010)

WIRTZ M, CASPAR F (2002): Beurteilerübereinstimmung und Beurteiler-reliabilität. Methoden zur Bestimmung und Verbesserung der Zuverlässigkeit von Einschätzungen mittels Kategoriensystemen und Ratingskalen. Göttingen: Hogrefe.

WOOLARD I (2002): An overview of poverty and inequality in South Africa. Working paper prepared for DFID (SA). University of Port Elizabeth.

http://www.sarpn.org.za/documents/e0000006/Poverty_Inequality_SA.pdf (accessed May 2010)

WOOLCOCK M (2001): The place of social capital in understanding social and economic outcomes. Canadian Journal of Policy Research (Isuma) 2(1):11-17.

WORLD BANK (2010): Overview on Social Capital.

http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTTSOCIALCAPITAL/0,,contentMDK:20642703~menuPK:401023~pagePK:148956~piPK:216618~theSitePK:401015,00.html (accessed May 2010)

APPENDICES

Appendix 1: Structured open-ended interview

Author's note: The layout has been minimised to save space. The original copy entails more space for answers and notes.

Introduction:

My name is Nicole Heumann, I am from Germany and I work in Potchefstroom at the North-West University. I am a research assistant within the Nutrition Research Group that is conducting this study about and for people living on farms in the North West Province. I have been visiting the people on the farms for the past two years. Last year I did a study on the general life style and the nutrition situation of people living on this farm.

This year I prepared a new study where I want to learn more about your life on the farms, the way you see and experience certain things including your problems and needs. We are doing this study to find solutions for future programmes that may help the people living on farms in the North West Province.

We will not be able to help or change your situation in the short term. What we want to do is to write reports and possibly a book and make that information available to people who are planning programmes, such as government officials. In that way decisions can be made which are more in line with what people living on farms really experience, and with what you need.

The following interview will take approximately one hour.

Everything that we will be talking about is confidential. We are not going to use your names or personal details in any way, so that your identity will not be revealed to the readers of our reports and publications. Everything that you tell us will remain between us and not be told to anybody else. We will not tell anything that you say to the farmer, but they will also be able to read the reports and publications regarding the situation on farms.

There are no "right" or "wrong" answers! The way you experience things on a daily basis is important to me. Please feel free to say whatever comes into your mind on the questions or topics we talk about during the interview. If you are unsure about anything, please feel free to tell me.

Just tell me if you feel uncomfortable with any question or if you do not want to answer the questions. We can stop the interview whenever you want to.

I would like to use the tape recorder during the interview. I want to use it because I am not a very quick writer and I am afraid to loose any information you give to me. However, the taped information is only used for research purposes and will not be given to other people. Do you want me to demonstrate the tape recorder? Do you feel comfortable with it?

Date	
Interview number	
Address	

Name (first name & surname)		
Sex	Male	
	Female	
What is your date of birth? Or How old are you?		
Where were you born? Distance from here? (*Clarify: rural, tribal, farm, urban area*)		
Do you have a partner?	Yes	If 'Yes': For how many years have you been together?
	No	
How would you describe your partnership?	Partnership	
	Customary marriage	
	Legal marriage	
For how many years have you stayed on this farm?		
What is your highest qualification/school standard?		
What type of job do you do on this farm?		
Cell phone: (in case we need to follow up something)		

At first I would like to learn something about you and the people living with you in your house.

1. Who is living with you in this house?

Name (first name and surname)	**Relationship**	**Sex**	**Age**	**Occupation** (pensioner, worker, pupil,…)	**Closeness** (use scale) 1 - very close 2 - close 3 - bit close 4 - not so close

1.1. Any changes since the last interview? **If 'yes'**: Why?

2. Besides the children mentioned: Do you have any (other) children? **If 'yes':**
   2.1. How many children do you have and how old are they?
   2.2. Where do they live? With whom? What is their relationship to the child?
   2.3. How long have/has the child/ren lived there?
   2.4. Why do they live there?
   2.5. Who decided that they would live there?
   2.6. Do you contribute something to the household where your child/ren stay/s? In which ways do you support that household? (money, food, help, …)

3. If there are foster children from elsewhere living in this household:
   3.1. Why does the child / do the children live here?
   3.2. Who are their biological parents? What is the relationship with the father or mother of this unit?
   3.3. Where do their biological parents live?
   3.4. Who decided that the child/ren live/s here?
   3.5. For how many years has/have the foster child/ren lived with this household?
   3.6. Do the biological parents contribute something to maintain this foster child? In which ways?

4. May I ask how much salary you get per month? (**NOTE**: Ask for salary before and after deductions)
   Follow-up: Do you get a bonus at the end of the year? How much?

5. Do you have any other sources of income?

	Yes	No	Type and amount
Grants			
Remittances from relatives or friends*			
Other formal work			
Informal work: - Seasonal work (harvesting) - Selling something - Jobs out of own initiative (piece jobs) - Other informal business			

***Follow-up: From whom? How much? How often?**

6. If you earn money, do you share your money with your partner (or people you live with)? **How much money do you give to your partner?** Do you discuss with your partner what you are going to use your money for?

7. Do you give regular remittances or financial support to any relative or friend?
   If 'yes':
   7.1. To whom, how often and how much?

8. Do you know how much money your partner gets monthly? *(Probe: salary and bonus end of the year, grants, seasonal work etc.)*

9. Does your partner give you money?
   If 'yes':
   9.1. How much money does your partner give you, and how often does s/he give you the money?

10. Does your partner give remittances or financial support to any relative or friend?
    If 'yes':
    10.1. To whom, how often and how much?

11. Do you discuss with your partner what will be done with his/her money?

12. Does any other household member earn / get money? *(Follow-up: Anyone else?)*
    If 'yes':
    12.1. Do you know how much this person gets?

    12.2. Does this person share his/her money with you or contribute money or goods to your household? *(e.g. food, clothes, toiletry)*

13. May I ask do you have any savings?
    If 'yes':
    13.1. Where do you keep your savings? (*e.g. bank, house, farmer…*)

14. Do you have any other investments such as stokvel (rotating savings association), burial society?

15. Do you or any other member of the household have any property outside the farm? (*e.g. land, house or stand, cattle and sheep*)
    If 'yes':
    15.1. What type of property and where *(urban, township or town), rural, tribal area)*?
    15.2. For how many years have you possessed it?
    15.3. To whom does it belong?
    15.4. Who is using it/looking after it at the moment?

    What are your future plans with it? (Probe: Do you see it as an investment/ insurance for the future/for your children, etc.)

With the following questions, I would like to learn more about your relationship you have to people living here on the farm and outside the farm. I would like to ask you for names and details of the persons in order to properly understand these relationships. I just want to say again that everything you tell us here is confidential and is not given to anyone else.

Note for interviewer: First, fill only names and relationships into the tables. Complete the table at the end of the interview! After every person that is mentioned follow-up: **Anyone else?**

16. Do other relatives of yours live on this farm? (Follow-up: Anyone else?)

Name (African and English name)		
Relationship		
Sex		
Age		
Occupation		
How often do you visit each other? **Who visits whom?**		
Exchange? 1 **eat together** (how often, where) 2 **help each other** (how, who helps whom) 3 **borrowing money** (how often, how much, who gives whom) 4 **non food exchange** (matches, smokes, snuff)		
Closeness (use scale) 1 - very close 2 - close 3 - bit close 4 - not so close		

17. Are there other persons on this farm you have contact to? *(Probe: visits for chatting or gossiping or just spending time together)* **(include them into the table above)**

18. Who of your relatives you have regular contact with is living outside of the farm (or on nearby farms)? **(follow up: parents and siblings, anyone else?)**

Name		
Relationship		
Sex		
Age		
Occupation		
Place and distance? (farm, rural village, tribal area, township, town)		
How often do you see each other? Who visits whom?		
Exchange?* (amount!) (money, food, clothes, toiletries, etc.) Who gives whom?		
Closeness (use scale) 1 - very close 2 - close 3 - bit close 4 - not so close		

*Do you take something with you when you visit them? Resp., do they bring something with them when they visit you? (Probe: money, food, toiletry, clothes, gifts, other)

19. Is there anybody else you see/visit? *(apart from the ones above, for example former neighbours, relatives and friends on other farms)* **(include them into the table above)**

Author's note: The questions 20-24 and 27 have been adopted from SCHWEIZER, SCHNEGG AND BERZBORN (1998)

20. Suppose you **need matches, paraffin, candles or something** like that and the shops are closed, or you need a piece of equipment (like a basin, bucket, sharp knife). Who would you ask to lend you these sort of things? (Follow-up: Anyone else?)

21. Suppose you **have problems with filling in forms or writing a letter**, for instance application form for a child grant. Who would you ask for help with such matters? (Follow-up: Anyone else?)

22. Most people discuss important matters with others. Who are the people with whom you **discuss matters important** to you? (Follow-up: Anyone else?)

23. Suppose you **need advice with a major change in your life**, for instance changing jobs or moving into another area. Who would you ask for advice if such a major change occurs in your life? (Follow-up: Anyone else?)

24. Suppose you have the flu and must stay in bed for a couple of days. Who would you ask to **take care of you or do some shopping** or helping with taking care of kids or assisting with household chores? (Follow-up: Anyone else?)

25. Suppose you get **ill for a longer period** and you are not able to care for yourself and your family anymore is there any person who can support you or any place where you can move and get support? (Follow-up: Anyone else?)

26. Suppose you need a **small amount of money** for example to buy small groceries like bread, matches or cool drinks. Who would you ask for it? (Follow-up: Anyone else?)

27. Suppose you **need to borrow a large sum of money** (R1000 or more). Who would you ask? (Follow-up: Anyone else?)

28. Suppose you don't have **enough food** for yourself and your family, who would you ask to give you food? (Follow-up: Anyone else?)

29. Suppose you have to **leave the farm** because you get layed off or the farm is sold. Do you have a place or relatives elsewhere to whom you could move to? (Follow-up: Anyone else?)

Note for the interviewer regarding questions 20-29: If persons appear in this section who are not mentioned in the table above (Question 18) yet, please include them and fill in the details of all persons mentioned.

In the following section I am interested in knowing more about your stay on this farm.

30. Have you worked or lived on other farms before coming here?

    If 'yes':

    30.1. Where was it? How far is it away from here?
    30.2. What were the reasons for leaving that place?

31. Have you ever lived in an urban area/ town before?

    If 'yes'

    31.1. Where did you live? How long did you live there? What did you do there?
    31.2. Why did you leave the place?

32. What made you decide to work on this farm? Where did you get information from?

33. Have other relatives / friends already worked here before you moved here?

    If 'yes':

    33.1. Who?
    33.2. Did you get information regarding this job from this person?

34. Are you satisfied with the following issues:

	Yes	No	Why / Why not?
Working conditions			
Salary			
Accommodation			
Sanitation facilities and access to water			
Shopping facilities			
Access to health services			
Support in emergencies			
Transport to town			
Access to loans and credits			
Safety/ Security (crime, theft, violence)			

34.1. What do you think should change or can be improved?
34.2. How do you see the role of the farm owner with regard to these issues*?*

35. Do you like the life on the farm? What do you think are the advantages and disadvantages of your life on the farm?

36. Would you prefer to live somewhere else?

If 'yes':

36.1. Where? *(town, village, etc)*
36.2. Why?

37. Do you have any future plans? *(Probe: with life, your work, move somewhere else, etc)*

38. Do you attend any church service?

If yes:

38.1. Where do you go? How often do you go there?
38.2. If you need help, could you ask the people in the church group for assistance? If 'Yes': What type of help could you ask for? *(Probe: food, money, advice-what type of advice, other?)*

39. Do you attend any other group meetings? (*e.g. stockfel, burial society, sewing group***, land claim community** *or any other group?*)

If 'yes':

39.1. Where do you go? How often do you go there? How is it organized?

39.2. If you need help, could you ask the people in this group for assistance? If 'Yes': What type of help could you ask for? *(Probe: food, money, advice, others?)*

In the following section I would like to learn something about the relationships between the persons living in this house.

40. Who takes decisions in this household with regard to:

	Man	Woman	Comments or other persons involved?
Small purchases (food, toiletry, etc.)			
Larger purchases for the house (e.g. TV, couch, …)			
Future plans (moving somewhere else, change of job)			
Family planning s(decision about having another child/ contraception)			
Children's education / school fees			
Support to relatives or friends who are in need (e.g. with money or goods)			
Other:			

41. Suppose you disagree with a decision made by your partner/by the person taking decisions. Would you talk about it with him/her or say nothing?

42. I have noticed that a lot of people living in partnerships are not married in this area. Why do you think it is like that?

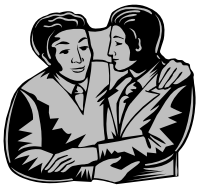
We have been visiting you on this farm since long time and we were also here last year in November when the farm was given back to the communities. I am therefore interested to know what your feelings are about this.

43. Do you belong to the community who claimed their land back in this area?

44. What do you think about the land claim?

45. Do you think the land claim will influence your life? In which way? Follow-up: With regard to working conditions, salary, accommodation, infrastructure and services, any other thoughts, fears or hopes?

Appendix 2: Closeness scale



Very close

Close

Bit close

Not so close

Appendix 3: Household food situation questionnaire

Author's note: Question of this questionnaire are adapted from LEMKE (2001).

Interview number: Name: Place: Date:

1. What kind of food do you have in your house at this moment?

2. Are you sometimes worried that there will be no food for the next day?
   2.1. If 'yes': What makes you worry?

Yes	
No	

3. Are there sometimes problems to get food or certain kinds of food?
   3.1. If 'yes': What are the problems?

Yes	
No	

4. Do you feel that there is sometimes not enough food for your children?
   4.1. If 'yes': Can you say how often or usually when this happens?

Yes	
No	

5. Does it sometimes happen that you go without food? (or go hungry)
   5.1. If 'yes': Can you say how often or usually when this happens?

Yes	
No	

6. Are there foods or something to drink that you would prefer to eat more often?
   6.1. If 'yes': What kinds of food? (*follow up: why?)*

Yes	
No	

7. Do you plant any vegetables?
   7.1. If 'yes': What type of vegetables or fruits?

Yes	
No	

8. Do you have livestock?
   8.1. If 'yes': What type of livestock?

Yes	
No	

Appendix 4: Life history interview guideline

Focus on:
- Living circumstances, general well-being, food and nutrition situation during life
- Change of residences during life, reasons for moving
- Important persons during life - why? (family and friends)

Birth: date, place, parents (who and what did they do)

Childhood: place, change of residences and reasons for moving
relationships & dynamics within family,
living circumstances
food and nutrition situation
(Did you have enough to eat? Did it sometimes happen that you went hungry?)

Adolescence: place, change of residence and reasons for moving
important people/friends (helping and supporting)
school education/ jobs
family situation
living circumstances
food and nutrition situation
(When were 'good / bad times' concerning your food situation?)

Adulthood: places lived, change of residence and reasons for moving,
reasons for coming to this farm
job situation
build own family – marriage, children – when?
important persons – now and then?

Political changes in South Africa. (1990/94)
experiences, feelings, changes in life: worse or better – why?

Appendix 5: Guideline for case study interview with HIV-infected person

1. General situation

- Since when do you live here?
- What is your occupation?
- Who is living with you in this house? (marital status)
- Do you have any income? (salary, grants, remittances)
- If sick grant: Is the sick grant enough to meet your needs?
- Does any other household member get any income?
- Where did you live before? (occupation there?)
- How old are you?
- Do you or any other household member have any property somewhere else?

- Since when do you know that you are HIV positive?
- How did you find out?
- Before you got infected, did you hear about HIV and the way you can infect yourself? Where did you hear from it?
- Since you know your status what has changed in your life? (and your family's life)
- What are the main problems you, as a HIV positive person, face here?
- Do you like to live here? Why/not?

2. Role of the family

- Do your family and relatives know that you are HIV positive? Did you tell them? Why/not?
- How was the reaction of your family when they heard you are HIV positive? Did you loose contact to some relatives or family members because of your disease?
- Who of your family and relatives is supporting you? Who? How (money, food, support in household), how often?
- Who cares most about you?
- How does your disease affect your family?

3. Role of the community?

- Do you think people around here are aware of HIV/AIDS?
- Do people around here talk openly about HIV/AIDS? Why/not?
- Do people around here know that you are HIV positive? Did you tell them? Why/not?
- Did your relationship to these people change since they know you are infected?
- Do people in this community help and support you? (visits, help with chores)
- Do you feel discriminated or avoided by some people in this community? Why?

4. Other support structures

- Do you think you get enough health support here? What is missing and what are the problems? Role of mobile clinic?
- In which ways does the caregiver help you? Are you satisfied with his work?
- To whom can you go to get information or discuss your problems with regard to your disease? Is there any counselling?
- Do you think living somewhere else would make your life easier? Where? Why?

- Do you think there are enough education and prevention programmes taking place in this area to make people aware of HIV/AIDS?
- What do you think has to be improved with regard to support for HIV positive people?
- If you would have the chance to talk openly to the people in your community, what would you tell them about HIV/AIDS?

Also ask ***household food situation questionnaire***!

Appendix 6: Interview guideline general social problems and HIV/AIDS

for key informants and farm dwellers

1. Main social problems among farm dwellers

- Do you think people in this neighbourhood can be trusted? Why/not?
- Do you think people around here are willing to help their neighbours? Do neighbours look after each other? Care for each other?
- Do people in this neighbourhood get along with each other?
- What do you think are the main problems in this community?
- How would you describe the employment situation in the community? (percentage of people being unemployed, where are people employed, is there a main employer?)
- Do you think there is a high crime rate in this area? (theft, rape, violence) Why/not?
- Do you think alcohol abuse is a problem in this community? Why do people drink? Is it more men or women how drink? What do you think are the consequences of alcohol abuse?
- What role does the farmer play with regard to these problems? Does he cooperate with the community and does he help?
- From your point of view how is the general health status of the people living here? Reasons for diseases?
- If you compare the situation in this farm area with an urban area, what do you think are the main differences?

2. HIV/AIDS in the community

- Do you think people around here are aware of HIV/AIDS?
- Do people in this community talk openly about HIV/AIDS?
- Do you think a lot of people here are infected with HIV? (more young or old people, men and women equally affected?)
- What do you think are the reasons for the HIV/AIDS spread? (lack of knowledge, interest, prevention programmes, alcohol, sexual behaviour…)
- Do you think there is a difference in the HIV/AIDS prevalence between here and urban areas?
- Do people get tested? Why/not?
- Do you think people try to protect themselves against HIV/AIDS? Who does and who does not? In which ways?
- Are condoms provided in this area? Where? Do people use them? Why/not (religious or traditional believes, lack of education, not a real feeling)?
- Would people admit openly their positive status to others in the community? Why/not? Is there danger of rumours, marginalisation, stigmatisation?
- Are HIV positive people accepted by the community or are they rather avoided? (stigmatisation, being excluded from certain activities?)
- Are there any remarkable changes in the community caused by the disease?

3. Difficulties faced by families affected by HIV/AIDS

- In your view, what do you think are the biggest problem a person with HIV/AIDS has to face? And his family?
- Do you think people infected or affected by HIV/AIDS get enough support? (e.g. counselling, financial support, emotional) What is missing?
- Is there acceptable access to medical treatment? Where? Costs?

- What consequences can HIV/AIDS have for families living here? (loss of employment, orphans, economic insecurity, change in family structure, exclusion?)
- Would people with HIV/AIDS prefer to live in town rather then here? Why/not?
- Would the community/neighbours and friends help a HIV/AIDS infected person with work like shopping, cooking, washing and cleaning?

4. Support structures for HIV/AIDS infected people?

- Do prevention and education programmes take place in this area? Who organises them? Since when? How often? In which ways do they approach the people (main message: condoms, abstinence, faithfulness, get tested)? How do people react to it? Are people interested in the issue? Does it influence the people's behaviour?
- How does the national, provincial and local government address the topic of HIV/AIDS in this area? (prevention programmes, education programmes)
- Are there non-governmental organisations like LOVE LIFE who address the topic here?
- Are there any health promoters in this area?
- Do you think infected people living here do get enough health support? Why/not? Does the mobile clinic do enough? Do they provide information, advice, counselling?
- Do you see any differences between the availability of education and prevention programmes in urban areas and on farms? What differences? Why is it like that?
- Do you think these programmes change something? Why/not?
- What do you think can be improved?
- Have you experienced any changes with regard to the type of programmes and regularity from the past to today?

5. Role of the church

- How is the church organised? Where is the Minister from? Do you have a church committee? Do farm workers form part of this committee? Who decides where the service takes place?
- How many people are in this church? And where are they from? Transport?
- What does the church offer to the people? How many services? Special events throughout the year?
- In which ways do you think the church helps/supports the people?
- If a member of the church is in need, how does the church help him? E.g. money problems, health problems, family problems
- Do you think the church members help/support each other when somebody is in need? Is there trust in the church community? Why/not?
- What difficulties does the church in this area face?
- Do you know how many other churches exist here in this area?
- Does the church address the above mentioned problems (poverty, crime, domestic violence, alcohol abuse…)? In which ways?
- Does the church address the topic HIV/AIDS? In which ways? What is the motto (abstain, be faithful, condoms)?

Appendix 7: Interview guideline farm eviction

We heard that the farm is sold to another farmer and there will be some changes within your life because of that.

- Since when do you know about it?
- Who told you about it?
- Do you know the new farmer? What do you think about him?
- What consequences will that change bring to your life? (new job, moving…)
- What do you think about that change?
- How do you feel about it? (happy/sad) Do you have any fears?
- What positive things do you see about that change?
- What are you going to do when you leave this farm?
- When working for the other farmer, what things will change for you? (with regard to working conditions, salary, accommodation, infrastructure and services)

- Are you looking forward to live somewhere else? Why/not?
- When do you move? Who is helping you? Do you already know the place where you going to move to? Do you like the new place?

Appendix 8: Economic status categories and corresponding values

To avoid erroneous statements, only the occupation of alters was asked during the interview, but not the exact income levels or alternative income sources, like social grants. The categorisation into the economic status is based on broad assumptions of income ranges according to the income that the majority of South African employees would earn in this field.

Economic status (estimated income level per month)	Values (n=697; missing values 24)
Very low economic status (no income from employment)	Unemployed (n=168)
Low economic status (< ZAR 3,000) **n=405**	Farm worker, part time on farm (n=139) Pensioner (n=102) Domestic worker (n=66) Seasonal farm worker (n=28) Painter in town – part time (n=14) Gardener (n=9) Works at shop (n=9) Petrol attendant (n=6) Piece jobs (n=6) Cooks at farm school (n=5) Part-time jobs out of farm (n=4) Warehouse worker (n=3) Cleaner (n=2) Works at butchery (n=2) Worker at wood factory (n=2) Bar tender at farm tavern (n=1) Garbage man (n=1) Landrock worker (n=1) Pipe installation worker (n=1) Taxi driver (n=1) Waitress (n=1) Works at scrap yard (n=1) Babysitter (n=1)
Middle economic status (ZAR 3,000-10,000) **n=57**	Own business* (n=16) Mine worker (n=6) Municipality employee (n=7) Social worker (n=4) Construction worker (n=4) Driver (n=3) Truck driver (n=3) Industrial worker (n=2) Baker (n=2) Electrician (works for Eskom) (n=2) Furniture maker (n=2) Nurse (n=2) Sales assistant (n=1) Teacher (n=2) Manager for gambling (n=1)
High economic status (> ZAR 10,000) **n=67**	Farm owner (n=52) Shop owner (n=10) Loaner (n=3) Own company in construction (n=1) Tavern owner (n=1)

* is mostly defined by selling food, having a tuck shop, sewing and selling clothes; may has a very wide range of income

Appendix 9: Contingency tables: Financial agreements between partners

Contingency tables of income allocation and discussion about money spending in 18 conjugal households (corresponding results to table 7.5.3, p. 191)

Table A: Men's and women's perspective on the sharing of man's income

		Man gives money to his woman from man's perspective: Yes n	Yes %	No n	No %	Total n	Total %
Man gives money to his woman from woman's perspective	Yes	14	77,8	0	,0	**14**	**77,8**
	No	1	5,6	3	16,7	**4**	**22,2**
Total		**15**	**83,3**	**3**	**16,7**	**18**	**100,0**
Level of agreement		*κ = 0.824* *PA = 94.4%*					

Table B: Men's and women's perspective on the sharing of woman's income

		Woman gives money to her partner from man's perspective: Yes n	Yes %	No n	No %	Total n	Total %
Woman gives money to her partner from woman's perspective	Yes	4	22,2	2	11,1	**6**	**33,3**
	No	3	16,7	9	50,0	**12**	**66,7**
Total		**7**	**38,9**	**11**	**61,1**	**18**	**100,0**
Level of agreement		*κ = 0.400* *PA = 72.2%*					

Table C: Men's and women's perspective on discussions about woman's money spending

		Discussion about woman's money spending from man's view: Yes n	Yes %	No n	No %	Total n	Total %
Discussion about woman's money spending from woman's view	Yes	7	46,7	2	13,3	**9**	**60,0**
	No	2	13,3	4	26,7	**6**	**40,0**
Total		**9**	**60,0**	**6**	**40,0**	**15***	**100,0**
Level of agreement		*κ = 0.444* *PA = 73.3%*					

** Three households did not answer the question.*

Table D: Men's and women's perspective on discussions about man's money spending

		Discussion about man's money spending from man's view				Total	
		Yes		No			
		n	%	n	%	**n**	**%**
Discussion about man's money spending from man's view	Yes	9	69,2	0	,0	**9**	**69,2**
	No	2	15,4	2	15,4	**4**	**30,8**
Total		**11**	**84,6**	**2**	**15,4**	**13**	**100,0**
Level of agreement		*κ = 0.581* *PA = 84.6%*					

Appendix 10: Contingency tables: Household decision-making

Contingency tables of household decision making from men's and women's perspective in 18 households (corresponding results to table 7.5.5, p. 193)

Table E: Men's and women's perspective on decisions about small purchases

		Decisions about small purchases from man's view						Total	
		Man		Woman		Both			
		n	%	n	%	n	%	n	%
Decisions about small purchases from woman's view	Man	1	5,6	0	,0	0	,0	**1**	**5,6**
	Woman	0	,0	9	50,0	6	33,3	**15**	**83,3**
	Both	0	,0	1	5,6	1	5,6	**2**	**11,1**
Total		**1**	**5,6**	**10**	**55,6**	**7**	**38,9**	**18**	**100,0**
Level of agreement		*κ = 0.208* *PA = 61.1%*							

Table F: Men's and women's perspective on decisions about larger purchases

		Decisions about large purchases from man's view						Total	
		Man		Woman		Both			
		n	%	n	%	n	%	n	%
Decisions about large purchases from woman's view	Man	0	,0	0	,0	1	5,6	**1**	**5,6**
	Woman	0	,0	2	11,1	5	27,8	**7**	**38,9**
	Both	2	11,1	1	5,6	7	38,9	**10**	**55,6**
Total		**2**	**11,1**	**3**	**16,7**	**13**	**72,2**	**18**	**100,0**
Level of agreement		*κ = 0.053* *PA= 50.0%*							

Table G: Men's and women's perspective on decisions future plans

		Decisions about future plans from man's view						Total	
		Man		Woman		Both			
		n	%	n	%	n	%	n	%
Decisions about future plans from woman's view	Man	3	16,7	-	-	6	33,3	**9**	**50,0**
	Woman	1	5,6	-	-	1	5,6	**2**	**11,1**
	Both	5	27,8	-	-	2	11,1	**7**	**38,9**
Total		**9**	**50,0**	**-**	**-**	**9**	**50,0**	**18**	**100,0**
Level of agreement		*kappa statistics could not be calculated because a symmetric 2-way table is not given.* *PA = 27.8%*							

Table H: Men's and women's perspective on decisions about family planning

		Decisions about family planning from man's view						Total	
		Man		Woman		Both			
		n	%	n	%	n	%	n	%
Decisions about family planning from woman's view	Man	0	,0	1	6,3	1	6,3	**2**	**12,5**
	Woman	0	,0	0	,0	6	37,5	**6**	**37,5**
	Both	1	6,3	,0	0	7	43,8	**8**	**50,0**
Total		**1**	**6,3**	**1**	**6,3**	**14**	**87,5**	**16***	**100,0**
Level of agreement		*κ = -0.059* *PA = 43.8%*							

** Two households did not answer the question.*

Table I: Men's and women's perspective on decisions about children's education

		Decisions about children from man's view						Total	
		Man		Woman		Both			
		n	%	n	%	n	%	n	%
Decisions about children from woman's view	Man	0	,0	0	,0	1	6,3	**1**	**6,3**
	Woman	0	,0	1	6,3	4	25,0	**5**	**31,3**
	Both	1	6,3	2	12,5	7	43,8	**10**	**62,5**
Total		**1**	**6,3**	**3**	**18,8**	**12**	**75,0**	**16***	**100,0**
Level of agreement		*κ = -0.067* *PA = 50.0%*							

** Two households did not answer the question.*

Table J: Men's and women's perspective on decisions about supporting someone

		Decisions about supporting someone from man's view						Total	
		Man		Woman		Both			
		n	%	n	%	n	%	n	%
Decisions about supporting someone from woman's view	Man	1	5,6	0	,0	2	11,1	3	16,7
	Woman	0	,0	0	,0	6	33,3	6	33,3
	Both	0	,0	1	5,6	8	44,4	9	50,0
Total		1	5,6	1	5,6	16	88,9	18	100,0
Level of agreement		*κ = 0.053* *PA = 50.0%*							

Appendix 21: Descriptive statistics: Ego's characteristics and network Size

Descriptive data and p-values of the comparison of egos' characteristics and egos' mean network size (corresponding results to table 7.6.2, p. 203)

Ego's characteristics	Number of alters on farm			Number of alters outside farm			Number of all alters		
	Mean	Std. dev.	Min; max	Mean	Std. dev.	Min; max	Mean	Std. dev.	Min; max
Place									
Inf. Settlement	**5.4**	**5.6**	**1; 20**	5.1	3.2	1; 11	11.3	7.4	5; 31
Ouplaas	**5.7**	**2.2**	**3; 10**	3.7	2.7	0; 13	10.7	3.9	4; 22
Koppiesplaas	**3.4**	**1.7**	**1; 6**	4.8	2.1	2; 10	9.6	1.7	7; 12
Vlakteplaas	**3.7**	**1.4**	**2; 6**	5.2	2.1	2; 9	9.7	3.0	5; 15
H-statistics	***H*(3)=11.28; p=0.010**			*H*(3)=5.72; p=0.126			*H*(3)=0.810; p=0.847		
Age									
20-40 years	**5.4**	**2.5**	**1; 10**	4.3	2.4	0; 10	10.8	3.5	6; 18
41-60 years	**5.3**	**3.9**	**1; 20**	4.6	3.1	0; 13	10.9	5.9	5; 31
> 60 years	**3.2**	**1.6**	**1; 7**	4.2	2.7	0; 8	8.8	2.7	4; 13
H-statistics	***H*(2)=7.85; p=0.020**			*H*(2)=0.05; p=0.977			*H*(2)=2.03; p=0.362		
Distance to place of birth									
1-50 km	5.2	2.2	1; 10	4.1	2.7	0; 13	10.3	3.7	5; 22
51-100 km	4.7	2.8	2; 9	4.5	0.5	4; 5	10.5	4.0	7; 17
> 100 km	4.7	4.3	1; 20	5.1	2.8	0; 11	11.0	5.5	4; 31
H-statistics	*H*(2)=3.39; p=0.184			*H*(2)=2.96; p=0.227			*H*(2)=0.18; p=0.915		
Length of stay on farm									
1-5 years	4.6	2.6	1; 9	4.6	2.7	0; 10	10.1	3.7	4; 17
6-10 years	5.2	4.2	2; 20	4.4	2.8	1; 11	10.6	5.9	5; 31
> 10 years	5.1	2.5	1; 10	4.3	2.6	0; 13	10.7	3.9	5; 22
H-statistics	*H*(2)=0.41; p=0.814			*H*(2)=0.17; p=0.917			*H*(2)=0.32; p=0.853		
Level of income									
none	3.8	3.1	1; 9	3.4	1.7	1; 5	8.8	3.6	5; 13
ZAR 1-500	5.5	2.9	2; 10	4.0	3.0	0; 8	10.7	4.4	4; 18
ZAR 501-1000	4.6	2.1	1; 9	4.5	2.8	0; 13	10.3	3.6	5; 22
> ZAR 1000	5.7	4.5	2; 20	4.7	2.3	2; 11	11.2	6.0	6; 31
H-statistics	*H*(3)=1.90; p=0.593			*H*(3)=0.99; p=0.804			*H*(3)=0.60; p=0.897		
Household category									
Conjugal	4.7	2.5	1; 10	4.5	2.4	1; 13	10.6	3.5	5; 22
Male-headed	4.6	1.6	2; 7	4.7	3.1	0; 10	9.3	3.6	4; 17
Female-headed	6.1	4.7	1; 20	3.5	3.0	0; 11	10.9	6.8	5; 31
H-statistics	*H*(2)=0.82; p=0.662			*H*(2)=1.45; p=0.485			*H*(2)=1.04; p=0.594		
Level of food security									
insecure	5.2	2.3	1; 10	4.5	2.7	0; 13	**11.1**	**3.8**	**5; 22**
secure	4.7	3.8	1; 20	4.3	2.7	0; 11	**9.8**	**5.0**	**5; 31**
U-statistics	*U*=378.50; p=0.097			*U*=478.00; p=0.768			***U*=345.00; p=0.035**		

Appendix 12: Descriptive statistics: Ego's characteristics and support forms

Descriptive data and p-values of the comparison of egos' characteristics and the mean number of alters providing different actual support forms (corresponding results to table 7.6.15, p. 226)

	Number of alters providing actual support								
	Visits			Joint meals			Food items exchange		
Ego's characteristics	**Mean**	**Std. dev.**	**Min; max**	**Mean**	**Std. dev.**	**Min; max**	**Mean**	**Std. dev.**	**Min; max**
Place									
Inf. Settlement	9.9	7.7	3; 31	2.1	2.1	0; 5	3.7	2.2	1; 7
Ouplaas	8.0	3.9	2; 18	3.0	2.2	0; 8	3.1	2.7	0; 11
Koppiesplaas	6.9	1.9	5; 10	1.7	1.7	0; 5	3.8	1.5	2; 6
Vlakteplaas	7.5	2.7	3; 12	2.2	1.3	0; 5	3.7	3.0	0; 8
H-statistics	*H*(3)=0.88; p=0.830			*H*(3)=4.03; p=0.259			*H*(3)=1.75; p=0.626		
Age									
20-40 years	8.3	3.3	3; 16	**3.1**	**1.9**	**0; 8**	3.0	2.3	0; 8
41-60 years	8.7	6.2	2; 31	**2.5**	**2.1**	**0; 8**	4.2	2.9	0; 11
> 60 years	6.5	3.0	3; 12	**1.1**	**1.5**	**0; 5**	3.3	2.3	0; 7
H-statistics	*H*(2)=2.29; p=0.319			***H*(2)=0.11.95; p=0.003**			*H*(2)=2.45; p=0.294		
Distance to place of birth									
1-50 km	7.9	3.6	2; 18	**2.9**	**1.9**	**0; 6**	3.3	2.6	0; 11
51-100 km	7.8	3.2	5; 13	**3.5**	**2.6**	**1; 8**	3.8	2.3	2; 8
> 100 km	8.7	6.0	3; 31	**1.6**	**2.0**	**0; 8**	3.6	2.3	0; 8
H-statistics	*H*(2)=0.02; p=0.990			***H*(2)=7.64; p=0.022**			*H*(2)=0.52; p=0.771		
Length of stay on farm									
1-5 years	7.8	3.4	3; 14	2.5	2.0	0; 6	3.3	2.6	0; 8
6-10 years	8.9	6.2	4; 31	2.4	1.4	0; 5	3.6	2.9	0; 8
> 10 years	8.0	3.9	2; 18	2.7	2.3	0; 8	3.4	2.4	0; 11
H-statistics	*H*(2)=0.09; p=0.958			*H*(2)=0.03; p=0.984			*H*(2)=0.10; p=0.949		
Level of income									
none	6.0	3.2	3; 11	1.4	1.7	0; 4	2.0	1.6	0; 4
ZAR 1-500	8.2	4.7	2; 16	2.2	1.7	0; 5	4.1	2.8	0; 8
ZAR 501-1000	7.8	3.3	3; 18	2.5	2.1	0; 8	3.6	2.7	0; 11
> ZAR 1000	9.3	6.4	5; 31	3.1	2.1	0; 8	3.0	1.9	0; 6
H-statistics	*H*(3)=2.09; p=0.555			*H*(3)=3.00; p=0.392			*H*(3)=2.68; p=0.453		
Household category									
Conjugal	8.0	3.4	3; 18	2.6	2.1	0; 8	3.6	2.7	0; 11
Male-headed	7.5	3.4	3; 14	2.1	1.4	0; 5	3.8	3.8	0; 8
Female-headed	8.9	7.4	2; 31	2.8	2.4	0; 6	2.6	2.6	0; 5
H-statistics	*H*(2)=0.12; p=0.941			*H*(2)=0.31; p=0.855			*H*(2)=1.36; p=0.507		
Level of food security									
Food insecure	8.3	3.8	2; 18	2.7	2.2	0; 8	**3.9**	**2.4**	**0; 11**
Food secure	7.9	5.3	3; 31	2.2	1.7	0; 6	**2.5**	**2.3**	**0; 7**
U-statistics	*U*=430.00; p=0.342			*U*=435.00; p=0.374			***U*=328.50; p=0.019**		

Table cont.

Ego's characteristics	Number of alters providing actual support: Small goods exchange Mean	Std. dev.	Min; max	Money Mean	Std. dev.	Min; max
Place						
Inf. Settlement	**2.0**	**2.6**	**0; 8**	4.4	3.6	0; 11
Ouplaas	**0.6**	**1.2**	**0; 5**	4.3	3.1	0; 13
Koppiesplaas	**0.5**	**0.7**	**0; 2**	3.2	3.0	0; 10
Vlakteplaas	**0.3**	**0.6**	**0; 2**	4.0	3.2	0; 10
H-statistics	***H*(3)=7.66; p=0.053**			*H*(3)=1.51; p=0.680		
Age						
20-40 years	0.3	0.5	0; 2	2.6	2.0	0; 7
41-60 years	0.9	1.9	0; 8	2.2	2.6	0; 10
> 60 years	1.7	2.1	0; 5	0.8	1.2	0; 4
H-statistics	*H*(2)=4.49; p=0.106			*H*(2)=4.77; p=0.092		
Distance to place of birth						
1-50 km	**0.4**	**0.9**	**0; 4**	4.5	3.1	0; 13
51-100 km	**0.5**	**0.5**	**0; 1**	3.0	3.0	0; 8
> 100 km	**1.7**	**2.2**	**0; 8**	3.8	3.4	0; 11
H-statistics	***H*(2)=11.17; p=0.004**			*H*(2)=1.73; p=0.422		
Length of stay on farm						
1-5 years	0.6	1.3	0; 5	4.9	3.0	1; 11
6-10 years	1.1	2.1	0; 8	4.4	2.9	0; 11
> 10 years	0.7	1.2	0; 5	3.3	3.3	0; 13
H-statistics	*H*(2)=0.62; p=0.735			*H*(2)=5.12; p=0.077		
Level of income						
none	0.4	0.9	0; 2	2.0	2.3	0; 6
ZAR 1-500	0.5	1.0	0; 3	4.0	2.9	0; 8
ZAR 501-1000	0.6	1.3	0; 5	4.6	3.3	0; 13
> ZAR 1000	1.3	2.2	0; 8	3.5	3.0	0; 11
H-statistics	*H*(3)=2.12; p=0.548			*H*(3)=4.14; p=0.247		
Household category						
Conjugal	0.6	1.2	0; 5	3.7	2.7	0; 13
Male-headed	0.4	0.9	0; 3	5.7	3.6	1; 10
Female-headed	1.4	2.4	0; 8	4.0	3.9	0; 11
H-statistics	*H*(2)=2.23; p=0.321			*H*(2)=2.77; p=0.250		
Level of food security						
Food insecure	0.7	1.2	0; 5	4.2	3.3	0; 13
Food secure	0.8	1.7	0; 8	3.6	3.1	0; 11
U-statistics	*U*=494.00; p=0.929			*U*=446.00; p=0.463		

Promotionsausschuss des FB 09

Agrarwissenschaften, Ökotrophologie und Umweltmanagement

Justus-Liebig-Universität Gießen

Bismarckstr. 24, 35390 Gießen

EIDESSTATTLICHE VERSICHERUNG

„Ich erkläre: Ich habe die vorgelegte Dissertation selbständig und ohne unerlaubte fremde Hilfe und nur mit den Hilfen angefertigt, die ich in der Dissertation angegeben habe. Alle Textstellen, die wörtlich oder sinngemäß aus veröffentlichten Schriften entnommen sind, und alle Angaben, die auf mündlichen Auskünften beruhen, sind als solche kenntlich gemacht. Bei den von mir durchgeführten und in der Dissertation erwähnten Untersuchungen habe ich die Grundsätze guter wissenschaftlicher Praxis, wie sie in der „Satzung der Justus-Liebig-Universität Gießen zur Sicherung guter wissenschaftlicher Praxis“ niedergelegt sind, eingehalten.“

Ort, Datum Unterschrift